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MINISTRY OF IRRIGATION AND POWER

REPORT OF THE KRISHNA—GODAVARI COMMISSION

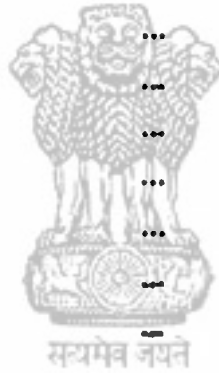


Annexure V Monthly Flow Data of the Godavari River System

July 1962

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FOREWORD

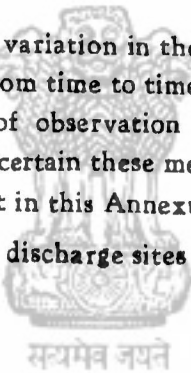
The data presented herein have been abstracted from Annexure VI, Ten-daily Discharge Data of the Godavari River System, and are subject to the remarks set out in the foreword of that Annexure.

As in Annexure VI, the year has been taken as the water year applicable to the hydrologic conditions on the Krishna and the Godavari rivers, from 1st June of one year to 31st May of the following year.

The flow at any site as shown herein includes the withdrawals, if any, at that site and releases from upstream storage, if any. This flow excludes upstream withdrawals and extractions for storage, if any.

The commission found a wide variation in the methods of observation or calculation of discharges adopted at various sites, from time to time. Since the reliability of river discharge data is closely related to the method of observation or calculation of river discharges, the Commission made special efforts to ascertain these methods. The information that could be obtained in this respect has been set out in this Annexure at each site.

An index map showing all the discharge sites is at the end of this Annexure.



**LIST OF SITES ON RIVER GODAVARI
FOR WHICH DISCHARGE DATA HAVE**

Note : Sites at which observations have been discontinued

Classification :

D₁—Sites at which velocity observa-

D₂—Sites at which velocity observa-

S —Sites at which velocity is estima-

C —Sites at which discharges are

A —Sites at which discharges are

T —Sites at which discharges are

spillway overflow and withdraw-

| Serial No. | Name of site | Name of State | Name of | |
|---------------|-------------------------|----------------|---------------|----------------------------|
| | | | sub-tributary | tributary or main river |
| 1 | 2 | 3 | 4 | 5 |
| 1. | Gangapur | Maharashtra | — | Godavari |
| 2. | Nandur Madhmesh- war | „ सयमेव जयते | — | „ |
| 3. | Puntumba | „ | — | „ |
| 4. | Toka | „ | — | „ |
| 5. | Mungi | „ | — | „ |
| 6. | Soan Bridge | Andhra Pradesh | — | „ |
| 7. | Mahcherial | „ | — | „ |
| 8. | Dummagudem | „ | — | „ |
| 9. | Dowlaishwaram | „ | — | „ |

AND ITS TRIBUTARIES

BEEN MADE AVAILABLE.

are shown in italics.

tions are made by currentmeter

tions are made by floats.

ted from observation of water-surface slope

calculated from gauge-discharge curves

calculated by weir formulae

based on capacity table of reservoir,

al through sluices

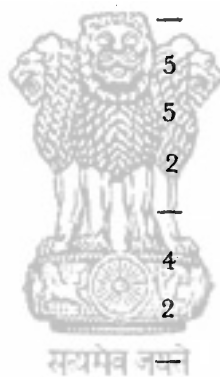
| Classifi- cation | Period for which data available | | Remarks | Serial No. |
|---------------------|--|--|--|---------------|
| | Period | No. of years for calculating ave- rage | | |
| 6 | 7 | 8 | 9 | 10 |
| D ₂ /T | 1906 to 1925-26 | 20 | Annual yield only | 1 |
| | Nov. 1945 to May 1961 | 14 | | |
| D ₂ /A | 1906 to 1925-26 | 20 | Annual yield only | 2 |
| A | June 1941 to May 1961 | 20 | | |
| D ₂ | Apr. 1951 to Dec. 1960 | 9 | | 3 |
| D ₂ | June 1954 to Dec. 1960 | 6 | | 4 |
| D ₂ | June 1954 to Dec. 1960 | 6 | | 5 |
| S | June 1946 to May 1961 | 15 | | 6 |
| D ₁ | Aug. 1955 to Dec. 1959 | — | Irregular observations. | 7 |
| C/A | April 1953 to Jan. 1954 and June 1957 to May 1961 | — | -do- | 8 |
| A | June 1901 to May 1961 | 60 | June 1901 to Dec. 1919 monthly figures only. Earlier data from 1895 to 1900 not included. | 9 |

| Serial No. | Name of site | Name of State | Name of | |
|------------|-------------------------|---------------|---------------|-------------------------|
| | | | Sub-tributary | tributary or main river |
| 1 | 2 | 3 | 4 | 5 |
| 10. | Darna (Lake Beale) | Maharashtra | — | Darna |
| 11. | <i>Chehadi</i> | „ | — | „ |
| 12. | Padli (Mukne) | „ | Aundh Nalla | „ |
| 13. | <i>Pimpalgaon Dukra</i> | „ | Karwa | „ |
| 14. | <i>Nasik Road</i> | „ | Waldevi | „ |
| 15. | Lakhamapur | „ | | Kadwa |
| 16. | Palkhed (weir) | „ | — | „ |
| 17. | Ozarkhed | „ | Unanda | „ |
| 18. | Waghad | „ | Kolwan | „ |
| 19. | <i>Khadakozar</i> | „ | Odal | „ |
| 20. | Bhandardhara | „ | — | Pravara |
| 21. | Ozer | „ | — | „ |
| 22. | <i>Newasa</i> | „ | — | „ |
| 23. | Chikalthan | „ | Mula | „ |
| 24. | Khadakwagulgaon | „ | Shiv | „ |
| 25. | Sidheshwar | „ | — | Purna |
| 26. | Purna Bridge | „ | — | „ |

| Classification | Period for which date available | | Remarks | Serial No. |
|-------------------|-----------------------------------|--------------------------------------|------------------------|------------|
| | Period | No. of years for calculating average | | |
| 6 | 7 | 8 | 9 | 10 |
| D ₂ /T | 1906 to 1925-26 | 19 | Annual yield only | 10 |
| T | June 1941 to May 1961 | 20 | | |
| D ₂ | June 1949 to Dec. 1960 | 8 | | 11 |
| D ₂ | 1906 to 1925-26 | 20 | Annual yield only | 12 |
| | June 1948 to May 1961 | 10 | | |
| D ₂ | 1909 to 1914, 1920, 1922 and 1923 | 9 | June to Dec. only | 13 |
| | June 1947 to May 1959 | 10 | | |
| D ₂ | Jan. 1956 to Dec. 1960 | — | Irregular observations | 14 |
| D ₂ | 1906 to 1925-26. | 20 | Annual yield only | 15 |
| | June 1948 to May 1961 | 12 | | |
| A | 1906 to 1925-26 | 20 | Annual yield only | 16 |
| | June 1941 to May 1961 | 20 | | |
| D ₂ | 1906 to 1925-26 | 20 | Annual yield only | 17 |
| | June 1948 to May 1961 | 12 | | |
| T | June 1941 to May 1961 | 20 | | 18 |
| D ₂ | June 1906 to May 1916 | 10 | | 19 |
| | 1917 to 1925-26 | 9 | Annual yield only | |
| T | Jan. 1947 to May 1961 | 14 | | 20 |
| D ₂ | 1906 to 1925-26 | 20 | Annual yield only | 21 |
| A | June 1941 to May 1961 | 20 | | |
| D ₂ | June 1954 to Dec. 1960 | 6 | | 22 |
| D ₂ | 1906 to 1925-26 | 20 | Annual yield only | 23 |
| | Aug. 1945 to May 1961 | 13 | | |
| D ₂ | Nov. 1958 to May 1961 | 2 | | 24 |
| D ₂ | Jan. 1958 to May 1961 | 3 | | 25 |
| D ₂ | Feb. 1958 to May 1961 | 3 | | 26 |

| Serial No. | Name of Site | Name of State | Name of | |
|------------|-----------------------------------|----------------|--------------------|-------------------------|
| | | | Sub-tributary | tributary or main river |
| 1 | 2 | 3 | 4 | 5 |
| 27. | Ghanpur Anicut | Andhra Pradesh | — | Manjra |
| 28. | Nizamsagar | " | — | " |
| 29. | Pocharam | " | Alair | " |
| 30. | Manair | " | — | Maner |
| 31. | Sanigram | " | Siddipetvagu | " |
| 32. | Ramappa Lake | " | Moruvanchavagu | " |
| 33. | Ghanpur Cheroo | " | " | " |
| 34. | Jafferabad | " | — | Pranhita |
| 35. | Majri | Maharashtra | Wardha | " |
| 36. | Ballarshah | " | " | " |
| 37. | Lakhanwara | Madhya Pradesh | Wainganga | " |
| 38. | Dhuti | " | " | " |
| 39. | Warsa | Maharashtra | " | " |
| 40. | Shingodi | Madhya Pradesh | Pench (Wain-ganga) | " |
| 41. | Totledoh | " | " | " |
| 42. | Pathagudem | Andhra Pradesh | — | Indravati |
| 43. | Pulusura (Uppe Kolab H.E. Scheme) | Orissa | — | Sabari |
| 44. | Jalaput (Machkund H.E. Scheme) | " | Sileru | " |

| Classifi- cation | Period for which date available | | Remarks | Serial No. |
|---------------------|--|--|--------------------------|---------------|
| | Period | No. of years for calculating ave- rage | | |
| 6 | 7 | 8 | 9 | 10 |
| A | June 1951 to May 1961 | 10 | | 27 |
| T | Sept. 1934 to May 1961 | 26 | | 28 |
| T | June 1948 to May 1961 | 13 | | 29 |
| T | June 1951 to May 1961 | 10 | | 30 |
| T | June 1953 to May 1961 | 8 | | 31 |
| T | Jan. 1956 to May 1961 | 5 | | 32 |
| T | Jan. 1956 to May 1961 | 5 | | 33 |
| D ₁ | Oct. 1957 to Nov. 1959 | — | | 34 |
| D ₁ | Aug. 1955 to May 1961 | 5 | | 35 |
| D ₁ | Aug. 1955 to May 1961 | 5 | | 36 |
| D ₂ | 1959 and 1960 | 2 | June to Oct. only | 37 |
| A | June 1941 to May 1961 | — | Irregular observations | 38 |
| D ₂ | June 1957 to May 1961 | 4 | | 39 |
| D ₂ | 1959 and 1960 | 2 | June to October only | 40 |
| | June 1960 to Jan. 1961 | — | | 41 |
| D ₁ | Oct. 1957 to Dec. 1959 | — | | 42 |
| A | June 1921 to May 1929 | 8 | Fortnightly figures only | 43 |
| A/T | June 1942 to May 1955 and Oct. 1959 to May 1961 | 13 | | 44 |



NOTATION

Unless otherwise stated, the following notation has been adopted herein :-

Q = Discharge in cusecs

L = Length, in feet, of weir or vent over which flow takes place

H = Depth of flow, in feet, on the crest of a weir

N = Number of end contractions

S = Surface slope of water flowing in a channel

$N(k)$ = Kutter's rugosity coefficient

$N(m)$ = Manning's rugosity coefficient

R, L = Reduced level, or elevation in feet above mean sea-level

h_a = Head, in feet, due to velocity of approach

V_a = Velocity of approach, in feet per second

g = Acceleration due to gravity, in feet per second per second

h = Head in feet

d = Difference (in feet) between the water level downstream of a weir and the crest of the weir

C = Coefficient

G = Gauge reading (in feet)

D = Depth of water in a channel

METHODS ADOPTED FOR OBSERVING DISCHARGES AT VARIOUS SITES ON THE GODAVARI AND ITS TRIBUTARIES

Note :—Sites at which observations have been discontinued are shown in italics.

(1) Godavari at Gangapur (Maharashtra) :

(i) Up to 1955, the area-velocity method was generally employed at this site.

The cross-section of the site was observed at intervals of three or four years when cross-sectional areas for different gauge heights were worked out. The site is reported to be stable.

The velocity observations during normal monsoon flow were made by using surface floats, generally wooden floats, released and picked up by trained swimmers. No boat was used. These observations were made at five points, one in the middle, one near each bank, and one between each bank and the middle. The gauge-run was usually 600 feet to 800 feet long and the mean surface velocity was obtained by dividing the length of the run by $\frac{1}{4}(t_1 + t_5 + t_2 + t_3 + t_4)$ in which t_1, t_2, t_3, t_4 and t_5 were the times, in seconds, taken by each successive float, starting from one bank of the river, to travel from the upper to the lower end of the gauge-run. The wooden floats were thrown such that they fell approximately in the required compartments.

The mean velocity was calculated by multiplying the mean surface velocity with a coefficient depending on the hydraulic mean depth in accordance with Higham's Table IV reproduced below :—

| <i>Hydraulic mean depth (feet)</i> | <i>Value of coefficient</i> | <i>Hydraulic mean depth (feet)</i> | <i>Value of coefficient</i> |
|--|-----------------------------|--|-----------------------------|
| 0.5 | 0.59 | 5.0 | 0.76 |
| 1.0 | 0.65 | 6.0 | 0.77 |
| 2.0 | 0.71 | 9.0 | 0.78 |
| 3.0 | 0.73 | 12.0 | 0.79 |
| 4.0 | 0.75 | | |

The gauge and velocity observations were usually taken twice a day at 6 A.M. and 6 P.M. but during monsoon, when there were frequent fluctuations in the discharge,

the observations were made more frequently. Gauge readings were taken both at the beginning and end of the velocity observations.

From the observations made in accordance with the method described above, standard discharge tables were prepared to serve as a check on the day to day work and for use when the velocity measurements were not made for any reason.

During the period from December to May, when the water-level was below zero level of the gauge, the flow was diverted into a small well-defined channel of uniform width for a length of about 50 feet and the velocity observations were taken by noting the time taken by a float to pass from one end to the other of the 50 feet channel; the float was released by a man wading through the channel. This surface velocity was reduced to mean velocity by multiplying with the constant from the above Table. The cross-sectional area was determined by sounding.

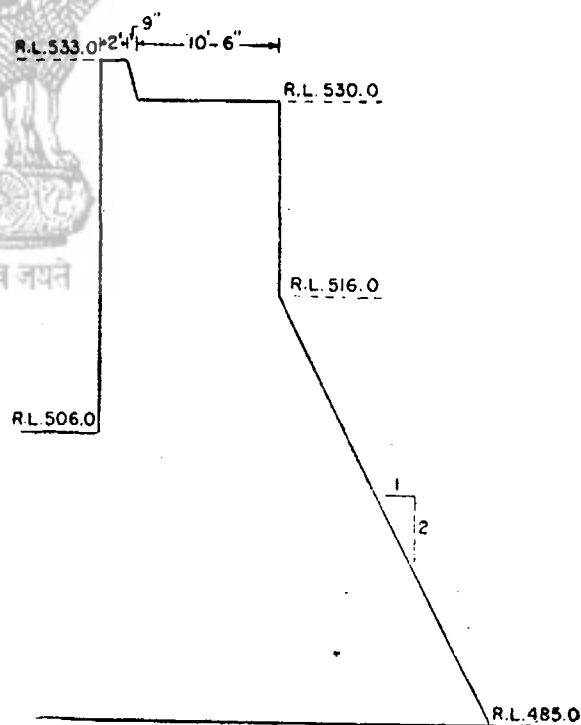
(ii) Since 1955, the discharges at this site are computed from the capacity table of the reservoir, surplus over the waste weir and the withdrawals through the sluices.

(2) **Godavari at Nandur Madhmeshwar (Maharashtra):**

The discharges at this site are based on gaugings recorded at the Nandur Madhmeshwar weir, aligned along a segment of a curve. The sum-total of the withdrawals through the sluices and the discharges over the weir gives the total supply at this site. The flow over the weir, which is free over-fall, is calculated by the formula $Q = 3.57 LH^{3/2}$ for all stages of flow. The section of the weir is shown in Figure 1.

There are two gauges, one on each bank. The water level is read from the gauge on the right flank.

Experiments carried out by Maharashtra in geometrically similar sectional models, on 1/20, 1/30 and 1/40 scales,



SECTION ACROSS NANDUR-MADMESHWAR WEIR

Figure 1

indicate that the value of the coefficient C in the formula $Q=CLH^{3/2}$ decreases from about 3.6 at $H=3$ feet to about 3.15 at $H=7.5$ feet and then increases to about 3.4 at $H=12$ feet.

(3) Godavari at Puntumba (Maharashtra) :

Generally the same as for (1) (i) above except that the floats were thrown by hand from the banks and not released by swimmers. The river bed is reported to be stable at this site.

(4) Godavari at Toka (Maharashtra) :

Generally the same as for (1) (i) above except that a boat was used to drop the floats. The river bed is reported to be stable at this site.

(5) Godavari at Mungi (Maharashtra) :

Same as for (3) above. The river bed is reported to be sandy and erodible at this site.

(6) Godavari at Soan Bridge (Andhra Pradesh) :

The slope-area method was adopted in working out the discharge of the river at this site. For all stages of the river, the value of slope S was taken as 1 in 1,295 and of N (k) as 0.03. A cross-section of the river was taken ten or eleven years back; gauge readings are available from 1946. The reference gauges are on the piers on the left flank of the bridge.

From some recent observations made in the river, above and below the Soan Bridge, it has been found that :

(a) the surface slope in low discharges is 1 in 3,774 at a point 1,100 feet upstream of the bridge ; and

(b) the surface slope at Kuchampalli site below the bridge varies from 1 in 2,000 to 1 in 1,250.

An automatic gauge is fixed in a gauge well at the central pier of the bridge ; but this is reported to be out of order. The bed of the river is stated to be rocky at this site.

(7) Godavari at Mancherial (Andhra Pradesh) :

From August 1955 to March 1958, velocity observations were taken by a current meter suspended from the top of the railway bridge and gauge readings were observed on a pier of the bridge. The velocities observed were surface velocities. A factor of 0.84 was used to convert surface velocities to mean velocities. Cross-section under each span of the bridge was observed twice a year, before and after monsoons.

From March 1958 to December 1959, except during high floods, current meter observations were taken at the gauge site at 0.6 D, about 2,000 feet downstream of the bridge, using a boat. Cross-sections at this site were taken before and after the monsoon. The river at this site is reported to be wide and the bed sandy.

(8) Godavari at Dummagudem (Andhra Pradesh) :

A calibrated gauge discharge table for the anicut at Dummagudem is used for calculating the discharges at this site ; no particulars are available of the method adopted for preparing the table. The anicut has a top width of 12 feet (6 feet of which is 6 inches lower than the rest). The upstream face of the anicut is vertical. Generally, free-fall conditions of flow occur at the anicut ; only during high flood the weir gets submerged.

(9) Godavari at Dowlaishwaram (Andhra Pradesh) :

(i) Gauges upstream and downstream of the anicuts and in the off-taking canals are regularly observed and recorded both in the morning and in the evening. From these observations the supplies withdrawn by the canals, the flow over the four anicuts (see Plate I) and the discharges through the undersluices are taken from discharge tables or calculated and the sum-total of these components gives the total flow of the river Godavari at Dowlaishwaram, the daily recorded discharge being the weighted average of the discharges corresponding to the morning gauge, to the evening gauge and to the morning gauge of the following day.

(ii) The important particulars of the four anicuts at the head of the Godavari Delta Canals are as follows :

| <i>Name of anicut</i> | <i>Length of shuttered portion</i> | <i>Number of shutters each 10' x 3'</i> | <i>Length of raised crest on the sides</i> | <i>Name of off-taking canal</i> |
|-----------------------|------------------------------------|---|--|-----------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| | (Feet) | | (Feet) | |
| Dowlaishwaram | 4470.50 | 445 | 376.75 | Eastern Delta Canal on left bank |
| Ralli | 2722.00 | 271 | 137.0 | Central Delta Canal on right bank |
| Maddur | 1415.50 | 141 | 134.0 | — |
| Vizeswaram | 2469.42 | 246 | 132.0 | Western Delta Canal on right bank |

(iii) All the anicuts have a crest level* of R. L. 38.75 and a crest width of about 17 feet ; the shape of the upstream curve of the anicut and of the downstream glacis, however, varies in different anicuts. The raised crests on the sides are designed to have top level of R.L. 41.75, the same as the top of the shutters, but actually there are slight variations from the designed level. A portion of the raised crest of the Dowlaishwaram Anicut is sloping and also curved.

(iv) A plan of the head works showing the position of the river gauges is at Plate I.

(v) For calculating discharges over the anicuts, under different conditions of flow, the following procedure is being followed from 1936 onwards : **

- (a) When the depth of flow over the anicuts is less than 3.0 feet, there can be no flow over the raised crest portion of the anicuts and flow over the anicuts is possible only in the portion where the shutters have been dropped. Under these conditions, the discharge is read from a table based on the formula :

$$Q = L (D + H) V_a \quad \text{..... (1)}$$

in which

L is the length of the portion of the anicut in which shutters have been

dropped, viz., number of shutters dropped \times 10 feet ;

$D = 7.0$ feet (assumed as the depth of river-bed below the crest level) ;

V_a is the velocity of approach. This varies with H and is taken from a table ; some of the values are as follows :

| H (Feet) | | V_a (Feet per second) |
|---------------|-----|----------------------------|
| 0.5 | ... | 0.15 |
| 1.0 | ... | 0.38 |
| 1.5 | .. | 0.70 |
| 2.0 | ... | 1.01 |
| 2.5 | ... | 1.32 |
| 3.0 | ... | 1.66 |

The velocity of approach as given in the tables has been obtained by equating

*The crest of all the four anicuts was originally at R. L. 38.00. This was raised by 9 inches and falling shutters 2 feet high were fitted in 1898. New falling shutters 3 feet high were fitted in 1936.

**No record is available of the discharge tables adopted prior to 1936 nor of the basis of those tables. It is likely that, for the conditions set out in paragraph (v) (a) and (v) (b), the same method was being followed from 1913 onwards as after 1936. Prior to 1913 the discharges were calculated by the formula $Q = 3.5 LH^{3/2}$ and the velocity of approach was ignored.

the discharge per foot run, as obtained by formula (1) above, with the discharge obtained by the following formula :

$$Q = 3.1 [(H + h_a)^{3/2} - h_a^{3/2}] \dots \dots \dots (2)$$

in which h_a is the head due to velocity of approach V_a .

Due allowance is also made for leakage between the standing shutters.

- (b) When the depth of water on the crest exceeds 3.0 feet and is less than 4.0 feet, the discharge over the anicut is taken from the formula :

$$Q = L (D + H) V_a + L_1 (D_1 + H_1) V_{a1}$$

in which

$D_1 = 10.0$ feet (assumed as the depth of river bed below the top of shutters or the raised crest),

H_1 is the depth of water above top of shutters or the raised crest ;

L_1 is the length of the portion of the anicut with shutters standing plus the effective length of the raised crest ; and

V_a and V_{a1} are the velocities of approach in the anicut lengths designated as L and L_1 respectively, and are obtained from tables (extract below) :

| H | V_a (for portion of anicut with fallen shutters) | V_{a1} (for portion of anicut with shutters standing and with raised crest) |
|-----|--|--|
| 3.2 | 1.79 | 0.02 |
| 3.4 | 1.92 | 0.07 |
| 3.6 | 2.05 | 0.18 |
| 3.8 | 2.19 | 0.20 |
| 4.0 | 2.33 | 0.28 |

The values of V_a have been calculated in the same manner as described in (a) above.

The values of V_{a1} have been calculated by equating the discharge passing over the standing shutters or the raised flanks, calculated by formula (2), with the discharge per foot run calculated by formula (1) [taking D as 10.0 feet and H as the depth of water over the shutters or on the raised flanks].

- (c) When the depth of water over the crest exceeds four feet, it is assumed that all the automatic shutters will have fallen (these shutters begin to fall when H is about 3.7 feet) and the discharge passing over each anicut is

then calculated (until the downstream water level rises above the crest level of the anicuts) by the formula :

$$Q = L (D + H) V_a + L_1 (D_1 + H_1) V_{a1}$$

in which

L_1 is the effective length (for the particular value of H) of the flanks with raised crest, and V_a and V_{a1} are taken from tables (extract below) :

| H (Feet) | V_a (for shuttered portion of anicuts) | V_{a1} (for flanks with raised crest) |
|---------------|--|---|
| |feet per second..... | |
| 4.3 | 2.53 | 0.41 |
| 4.5 | 2.68 | 0.50 |
| 5.0 | 3.00 | 0.73 |
| 5.5 | 3.34 | 0.99 |
| 6.0 | 3.68 | 1.23 |
| 6.5 | | 1.53 |
| 7.0 | | 1.81 |
| 7.5 | | 2.09 |

The values of V_a given above are as fixed by the Chief Engineer in 1938* after some modification of the results obtained by calculations carried out in the manner set out in (b) above.

The values of V_{a1} given above were calculated in the same manner as set out in (b) above.

Discharge tables, prepared in accordance with the formula and values given above* are followed until the downstream water level rises above the crest level of each anicut ; this is assumed to happen when H exceeds the values given below :

| Name of Anicut | For the shuttered portion | For the raised flanks |
|----------------|---------------------------|-----------------------|
| Dowlaiswaram | 4.3 | 5.6 |
| Ralli | 5.1 | 6.6 |
| Maddur | 5.9 | 7.3 |
| Vizeswaram | 6.2 | 7.5 |

(d) When the depth over the crest exceeds the values given in the above table (i.e., when the flow over the anicut is assumed as under "drowned" condi-

* No information is available of the method adopted prior to 1938.

tions) the discharge passing over the shuttered portion of the anicut is calculated by means of formula (1) taking D as 7.0 feet and taking the values of from tables (extract below) :

| <i>Depth on crest</i> | | <i>Velocities of approach V_a for "drowned" conditions. (feet per second)</i> | | | |
|-----------------------|---------------------|--|---------------|--------------------|--|
| <i>H</i> | <i>Dowlaiswaram</i> | <i>Ralli</i> | <i>Maddur</i> | <i>Vizianwaram</i> | |
| 5.0 | 2.88 | 3.08 | — | — | |
| 6.0 | 2.92 | 3.56 | 3.88 | — | |
| 7.0 | 2.99 | 3.80 | 3.98 | 4.15 | |
| 8.0 | 3.08 | 3.90 | 4.16 | 4.28 | |
| 9.0 | 3.20 | 3.98 | 4.47 | 4.58 | |
| 10.0 | 3.36 | 4.12 | 5.03 | 4.99 | |
| 11.0 | 3.55 | 4.32 | 5.78 | 5.46 | |

The values for the velocities of approach, as given above, were fixed in 1936 by equating the discharge per foot run, as obtained by formula (1) above with the discharge obtained by the following formula :

$$Q = 3.1 [(h + h_a)^{3/2} - h_a^{3/2}] + 8Cd(h + h_a)^{1/2} \dots\dots\dots(3)$$

in which

h is the difference of the water levels upstream and downstream of the anicut ;

C is a coefficient ; and

d is the depth in feet of the downstream water level above the crest.

In working out the values of V_a by the above-mentioned process, D was assumed as 7.0 feet and the value of d was fixed, separately for each anicut, for different values of H , by a study of river gauges, upstream and downstream, for the years 1922, 1927 and 1929 and drawing a mean curve between three widely* different curves for those years.

The values of C , taken as varying with d , are as follows :

| <i>d</i> | | <i>C</i> |
|--------------------|-----|----------|
| Less than 6.0 feet | ... | 0.60 |
| 6.0 feet | ... | 0.62 |
| 7.0 feet | ... | 0.66 |
| 8.0 feet | ... | 0.75 |
| 9.0 feet | ... | 0.80 |
| 10.0 feet | ... | 0.90 |
| 11.0 feet | ... | 0.93 |
| 12.0 feet and over | ... | 0.95 |

* A comparison of the mean curve with corresponding curves for the years 1912, 1919 and 1953, however, shows a fairly close fit.

The discharges passing over the raised flanks are taken from curves based on formula (3), taking h and d as applicable to the conditions on the flanks, $h_a = \frac{V_a^2}{2g}$ and taking the values of V_a from the above table, applicable to the shuttered portion of the respective anicut.

(vi) The withdrawals by the canals taking off at Dowlaishwaram are based on observed gauges in the canals. Various formulae were evolved based on the gaugings conducted from time to time. Gauge-Discharge tables based on canal gaugings were introduced for Dowlaishwaram and Bobberlanka canals in 1942 and 1941 respectively and are in use since then. Gauge-Discharge table for the Vizeswaram canal was prepared in 1933 based on the following formulae :

(i) For gauge readings up to 5.0 feet,

$$Q = 150 (G + 0.6)^{5/3}$$

(ii) For gauge readings 5.1 feet and above,

$$Q = 1,000 G - 2,500$$

This table is in use since 1933.

(vii) The discharges passed through the anicut under-sluices are being calculated from 1928-29 as follows :

(i) when the under-sluice gates are clear of water :

$$Q = 5.6 L \sqrt{h} (H - 0.33 h)$$

(ii) when the under-sluice is wholly submerged :

$$Q = 5.6 L d \sqrt{h}$$

(iii) when the under-sluice opening is partially submerged :

$$Q = 3.1 L (H^{3/2} - H_1^{3/2}) + 5.6 L d \sqrt{h}$$

where Q = discharge through under-sluices

L = length of vent

d = height of vent

h = difference between upstream and downstream water levels

H = upstream depth of water above sill

H_1 = depth of shutter bottom below upstream water level.

(10) Darna at Darna (Lake Beale) (Maharashtra):

From the daily water levels observed in the lake, the contents of the lake are determined by referring to the "content table." Discharges through various sluices

in the dam, surplus flow over the spillway, leakage, evaporation and absorption losses etc. for every day are recorded in a statement. From these, the discharges at this site are worked out.

(11) *Darna at Chhadi (Maharashtra) :*

Generally the same as for (1) (i) above, except that the floats were dropped from a bridge about 200 feet upstream of the site and not released by swimmers or from a boat. The river bed is reported to be stable at this site.

(12) *Aundh Nalla (Darna) at Padli (Mukne) (Maharashtra) :*

Same as for (1) (i) above. The river bed is reported to be unstable at this site.

(13) *Karwa (Darna) at Pimpalgaon Dukra (Maharashtra) :*

Same as for (1) (i) above. The river bed is reported to be unstable at this site.

(14) *Waldevi (Darna) at Nasik Road (Maharashtra) :*

Same as for (1) (i) above. The river bed is reported to be sandy and unstable at this site.

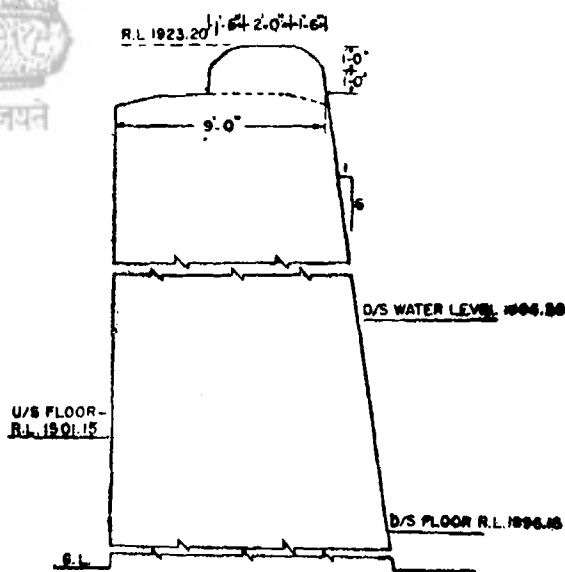
(15) *Kadwa at Lakhamapur (Maharashtra) :*

Same as for (1) (i) above. The river bed is reported to be stable at this site.

(16) *Kadwa at Palkhed (Weir) (Maharashtra) :*

The discharges at this site are based on the gauge observations made at the Palkhed weir aligned along a segment of a circle. The flow over the weir is calculated by the formula $Q=3.08LH^{3/2}$ for all stages of flow over the weir. The sum of the withdrawals through the sluices and the discharges over the weir give the total discharge at this site. Free-fall conditions occur at the weir.

Model experiments have been conducted by Maharashtra with sectional models, on 1/15, 1/24 and 1/40 scales, to study the variation in the values of the coefficient in the formula $Q=CLH^{3/2}$ for different values of H . The value of the coefficient C increases from about 3.5 for $H=2.0$ feet to about 4.1 for $H=8.0$ feet. The cross-section of the weir is shown in Figure 2.



SECTION ACROSS PALKHED WEIR

Figure 2.

(17) **Unanda (Kadwa) at Ozarkhed (Maharashtra)**

Same as for (1) (i) above. The river bed is reported to be unstable at this site.

(18) **Kolwan (Kadwa) at Waghad (Maharashtra) :**

Same as for (10) above.

(19) **Odal (Kadwa) at Khadakozar (Maharashtra) :**

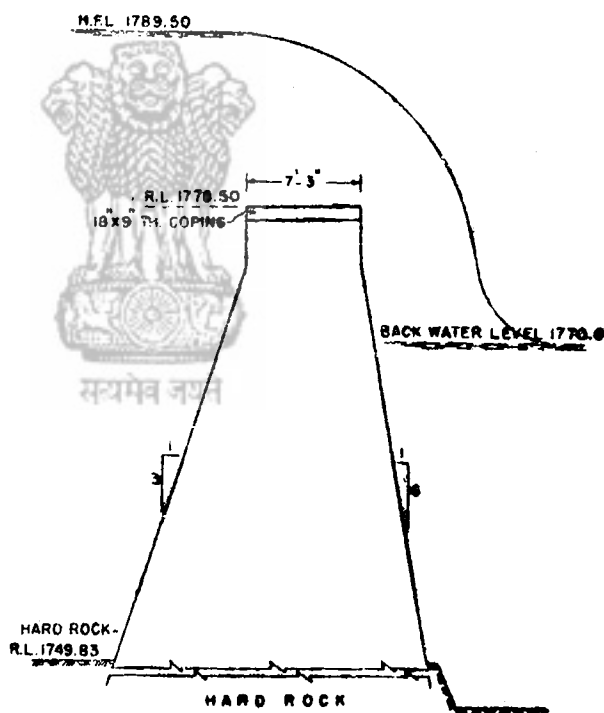
Same as for (1) (i) above. Whether a boat was used or not is not known. The river bed is stated to be non erodible.

(20) **Pravara at Bhandardhara (Maharashtra) :**

Same as for (10) above.

(21) **Pravara at Ozer
(Maharashtra) :**

Discharges at this weir are the sum total of flows over the weir calculated by formula $Q=3.09 LH^{3/2}$ for all stages of flow over the weir and the withdrawals through the sluices. Generally, free-fall conditions occur at the weir. The cross-section of the weir is shown in *Figure 3*.



SECTION ACROSS WEIR AT OZER

Figure 3

(22) **Pravara at Newasa (Maharashtra) :**

Same as for (1) (i) above. The river bed is reported to be sandy and unstable at this site.

(23) Mula at Chikalthan (Maharashtra) :

Same as for (1) (i) above. The river bed at this site is stated to be not erodible.

(24) Shiv at Khadakwagulgaon (Maharashtra) :

Same as for (1) (i) above. The condition of the river bed at this site is not known.

(25) Purna at Sidheshwar (Maharashtra) :

Same as for (1) (i) above. The river bed is reported to be stable at this site.

(26) Purna at Purna Bridge (Maharashtra) :

The discharges at this site are obtained from velocity observations taken by suspending a current meter, about 50 feet down, from the railway bridge and readings of a gauge on a bridge pier. The velocities recorded are surface velocities and are taken in each span at three points, one in the centre of the span and the others at the right-third and left-third. At each point three observations are made and the mean of these is taken.

For velocities higher than about 10 feet, float observations are made; the surface velocities are reduced to mean velocities by multiplying them by 0.84.

Cross-sections at this site are taken twice a year before and after the monsoon.

The river bed is reported to be sandy and erodible at this site.

(27) Manjra at Ghanpur Anicut (Andhra Pradesh) :

The river discharge at this site is estimated on the basis of depth of flow over the anicut. The anicut is, however, not straight but tortuous with re-entrant angles. Upstream of the anicut, the river hugs the right bank and then flows parallel to the anicut towards the left flank. The gauge on the left flank is marked only in feet and quarters. Because of parallel flow, the depth of water over the anicut varies along its length and the gauge readings on the two sides are different. Gauges are recorded by separate gauge recorders on each flank and each calculates the discharge by "the usual formula" taking his own gauge reading and the lineal length of the anicut along bends and curves.

(28) Manjra at Nizamsagar (Andhra Pradesh) :

Same as for (10) above.

(29) Alair (Manjra) at Pocharam (Andhra Pradesh) :

Same as for (10) above.

(30) Maner at Manair (Andhra Pradesh) :

Same as for (10) above.

(31) Siddipetvagu (Maner) at Sanigram (Andhra Pradesh) :

Same as for (10) above.

(32) Moruvanchavagu (Maner) at Ramappa Lake (Andhra Pradesh) :

Same as for (10) above.

(33) Moruvanchavagu (Maner) at Ghanpur Cheroo (Andhra Pradesh) :

Same as for (10) above.

(34) *Pranhita at Jafferabad (Maharashtra—Andhra Pradesh)* :

From September 1957 to December 1959, current meter observations were carried out at, $0.6D$. The site is reported to be sandy and erodible. Cross-sections were taken twice a year before and after the monsoon.

(35) *Wardha (Pranhita) at Majri (Maharashtra)* :

From August 1955 to March 1958, surface velocities were recorded by a current meter, suspended from the railway bridge; and readings were taken of a gauge on a bridge pier. These were used for calculating the discharges at this site. A factor of 0.84 was employed to convert surface velocities to mean velocities. Cross-sections were taken twice a year, before and after monsoon.

From March 1958, current meter observations are being made from a boat, at $0.6D$, about a mile upstream of the bridge. Cross-sections at this site are observed twice a year, before and after the monsoon.

The bed of the river is reported to be sandy and erodible at this site.

(36) *Wardha (Pranhita) at Ballarshah, below the confluence of Wardha and Penganga (Maharashtra)* :

Same as for (35) above. The river bed is reported to be erodible at this site.

(37) *Wainganga (Pranhita) at Lakhanwara (Madhya Pradesh)* :

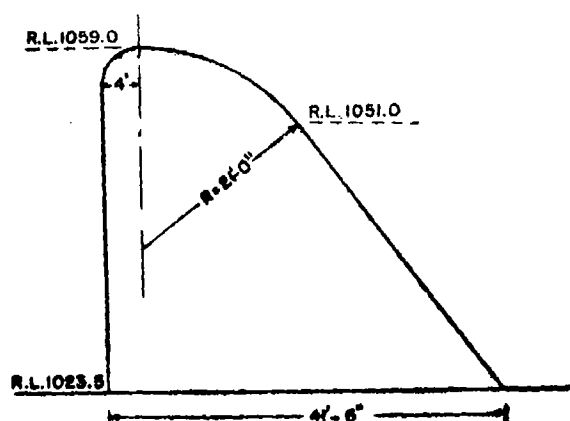
The method adopted at this site is the area-velocity method. The surface velocities are observed by floats and are reduced to mean velocities by multiplying them with 0.8. The river bed at this site is reported to be rocky and not erodible.

(38) *Wainganga (Pranhita) at Dhuti (Madhya Pradesh)* :

The discharges are based on the overflow over the weir, calculated by the formula $Q = 3.25LH^{3/2}$, and the canal withdrawals. Generally clear overfall condition occurs at the weir. The cross-section of the anicut is shown in Figure 4.

(39) *Wainganga (Pranhita) at Warsa (Maharashtra)* :

Same as for (7) above except that the observations at the bridge site were started in June 1957 and that at the gauge site, a furlong below, from June 1958. The river bed is reported to be sandy and erodible except for about 200 feet rocky bed on the right flank.



SECTION ACROSS DHUTI ANICUT

Figure 4.

(40) Pench (Wainganga) at Solingodi (Madhya Pradesh) :

Same as for (37) above. The river bed at this site is reported to be not erodible.

(41) Pench (Wainganga) at Totledoh (Madhya Pradesh) :

From June 1955 to July 1958 the slope area method was used, taking the value of $N(k)$ as 0.025 and S obtained from the difference in the gauge readings of the upstream and downstream gauges at this site. During July 1958 to November 1960, the method adopted was as in (37) above, the floats being thrown from the bank; cross-sections were taken periodically after monsoon. Since December 1960, current meter observations are made at $0.6 D$ for velocities up to 3 feet per second and at $0.2 D$ and $0.8 D$ for higher velocities. The site is reported to be erodible.

(42) Indravati at Pathagudem (Andhra Pradesh) :

Same as for (34) above. However, the site is reported to be partly rocky and partly sandy.

(43) Sabari at Pulusura (Upper Kolab H.E. Scheme) (Orissa) :

The flows in Sabari near Pulusura have been gauged during the period 1921 to 1932 and the discharges were calculated from the gauge discharge relationship, based on empirical formulae derived for the weir at Pulusura; details of the gauge discharge calibration of the weir are not available.

(44) Sileru (Sabari) at Jalaput (Machkund H.E. Scheme) (Orissa) :

The discharges of Sileru at Jalaput were calculated from the gauge discharge relationship (based on empirical formulae of weir discharges) derived for the weir constructed in 1942, about a mile above the Duduma falls. Other particulars are not available.

Since the construction of the Jalaput dam the inflows at the dam site are obtained from the capacity table of the Jalaput reservoir.

MONTHLY FLOW DATA OF THE GODAVARI RIVER SYSTEM



सत्यमेव जयते

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 1

River Godavari

Site Gangapur

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------|------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906-07 . . . | | | | | | | |
| 07-08 . . . | | | | | | | |
| 08-09 . . . | | | | | | | |
| 09-10 . . . | | | | | | | |
| 10-11 . . . | | | | | | | |
| 1911-12 . . . | | | | | | | |
| 12-13 . . . | | | | | | | |
| 13-14 . . . | | | | | | | |
| 14-15 . . . | | | | | | | |
| 15-16 . . . | | | | | | | |
| 1916-17 . . . | | | | | | | |
| 17-18 . . . | | | | | | | |
| 18-19 . . . | | | | | | | |
| 19-20 . . . | | | | | | | |
| 20-21 . . . | | | | | | | |
| 1921-22 . . . | | | | | | | |
| 22-23 . . . | | | | | | | |
| 23-24 . . . | | | | | | | |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 20 Years' Mean | | | | | | | |



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 1

River Godavari

Site Gangapur

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|-----------------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906-07 . . . | | | | | | | | 5.5 |
| 07-08 . . . | | | | | | | | 14.6 |
| 08-09 . . . | | | | | | | | 10.0 |
| 09-10 . . . | | | | | | | | 10.2 |
| 10-11 . . . | | | | | | | | 7.9 |
| 1911-12 . . . | | | | | | | | 5.4 |
| 12-13 . . . | | | | | | | | 17.4 |
| 13-14 . . . | | | | | | | | 21.9 |
| 14-15 . . . | | | | | | | | 22.4 |
| 15-16 . . . | | | | | | | | 12.6 |
| 1916-17 . . . | | | | | | | | 12.3 |
| 17-18 . . . | | | | | | | | 14.8 |
| 18-19 . . . | | | | | | | | 6.2 |
| 19-20 . . . | | | | | | | | 17.2 |
| 20-21 . . . | | | | | | | | 7.7 |
| 1921-22 . . . | | | | | | | | 11.6 |
| 22-23 . . . | | | | | | | | 14.6 |
| 23-24 . . . | | | | | | | | 13.7 |
| 24-25 . . . | | | | | | | | 14.7 |
| 25-26 . . . | | | | | | | | 6.5 |
| 20 Years' Mean | | | | | | | | 12.4 |

Note—The figures for the years 1906-07 to 1919-20 are for seven months, June to December. The figures for the years 1922-23 to 1925-26 are for twelve months from May to April. The position regarding figures for 1920-21 and 1921-22 is not clear.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 1

River Godavari

Site Gangapur

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|-------|-------|-------|-------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1945-46* | | | | | | | 9 |
| 1946-47 . . . | 15 | 1,860 | 3,221 | 584 | 185 | 236 | 16.2 |
| 47-48 . . . | (Nil) | 1,413 | 1,356 | 2,134 | 324 | 42 | 13.9 |
| 48-49 . . . | 64 | 1,154 | 1,873 | 492 | 242 | 454 | 11.4 |
| 49-50 . . . | 1 | 382 | 816 | 1,020 | 228 | 53 | 6.5 |
| 50-51 . . . | Nil | 8,435 | 1,025 | 2,953 | 435 | 160 | 34.6 |
| 1951-52 . . . | 1 | 477 | 1,544 | 136 | 357 | 43 | 6.9 |
| 52-53 . . . | 106 | 4,512 | 1,116 | 97 | 90 | 18 | 15.9 |
| 53-54 . . . | 833 | 1,669 | 6,236 | 1,484 | 1,011 | 10 | 29.9 |
| 54-55 . . . | | | | | | | |
| 55-56 . . . | Nil | 931 | 2,797 | (770) | (298) | (99) | 13.0 |
| 1956-57 . . . | 6 | 2,713 | 81 | 55 | 46 | (99) | 7.9 |
| 57-58 . . . | 142 | 858 | 3,058 | 447 | 100 | 129 | 12.7 |
| 58-59 . . . | 22 | 1,570 | 15 | Nil | 7 | 10 | 4.3 |
| 59-60 . . . | 10 | 5,426 | 3,420 | 115 | 827 | 9 | 26.2 |
| 60-61 . . . | 28 | 1,330 | 2,695 | 492 | 22 | 20 | 12.4 |
| 14 Years' Mean | 88 | 2,338 | 2,090 | 770 | 298 | 99 | 15.1 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 1

River Godavari

Site Gangapur

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|------------------|-------------------------|------|------|-------|-------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.O. |
| 1945-46* | 7 | 6 | 4 | 2 | 2 | Nil | Nil | |
| 1946-47 | 32 | 15 | 9 | 6 | 4 | 2 | 0.1 | 16.3 |
| 47-48 | 18 | 13 | 11 | 7 | 3 | Nil | Nil | 13.9 |
| 48-49 | 23 | 9 | 2 | 1 | 1 | 1 | 0.1 | 11.5 |
| 49-50 | 16 | 7 | 3 | 3 | 4 | 1 | Nil | 6.5 |
| 50-51 | 22 | 17 | 6 | 2 | 1 | 1 | 0.1 | 34.7 |
| 1951-52 | 24 | 5 | 2 | (Nil) | (Nil) | Nil | 0.1 | 7.0 |
| 52-53 | 9 | 4 | 3 | 2 | 2 | 1 | Nil | 15.9 |
| 53-54 | 4 | 1 | 1 | 1 | (Nil) | (Nil) | Nil | 29.9 |
| 54-55* | | | | Nil | Nil | Nil | | |
| 55-56 | (15) | 44 | (5) | 3 | Nil | Nil | 0.1 | 13.1 |
| 1956-57 | (15) | Nil | (5) | 10 | Nil | Nil | Nil | 7.9 |
| 57-58 | 10 | 16 | Nil | Nil | 21 | 17 | 0.1 | 12.8 |
| 58-59 | 14 | 6 | 23 | Nil | Nil | Nil | 0.1 | 4.4 |
| 59-60 | Nil | 3 | 2 | Nil | Nil | Nil | Nil | 26.2 |
| 60-61 | 10 | 10 | Nil | 113 | 66 | 65 | 0.7 | 13.1 |
| 14 Years' Mean | 15 | 11 | 5 | 11 | 7 | 6 | 0.1 | 15.2 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 2

River Godavari

Site Nandur Madhmeshwar

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------|------|------|---|------|---------------------------------------|
| | June | July | Aug. | Sep. | O | Nov. | |
| 1906 | . | . | . | | | | |
| 07 | . | . | . | | | | |
| 08 | . | . | . | | | | |
| 09 | . | . | . | | | | |
| 10 | . | . | . | | | | |
| 1911 | . | . | . | | | | |
| 12 | . | . | . | | | | |
| 13 | . | . | . | | | | |
| 14 | . | . | . | | | | |
| 15 | . | . | . | | | | |
| 1916 | . | . | . | | | | |
| 17 | . | . | . | | | | |
| 18 | . | . | . | | | | |
| 19 | . | . | . | | | | |
| 20 | . | . | . | | | | |
| 1921 | | | | | | | |
| 1922-23 | . | . | . | | | | |
| 23-24 | . | . | . | | | | |
| 24-25 | . | . | . | | | | |
| 25-26 | . | . | . | | | | |
| 20 Years' Mean | | | | | | | |



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 2

River Godavari

Site Nandur Madhmeshwar

| Year | Mean discharge (cusecs) | | | | | | Volume | |
|-----------------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906 . . . | | | | | | | | 63.7 |
| 07 . . . | | | | | | | | 106.5 |
| 08 . . . | | | | | | | | 103.6 |
| 09 . . . | | | | | | | | 56.8 |
| 10 . . . | | | | | | | | 94.3 |
| 1911 . . . | | | | | | | | 21.7 |
| 12 . . . | | | | | | | | 47.8 |
| 13 . . . | | | | | | | | 59.6 |
| 14 . . . | | | | | | | | 109.3 |
| 15 . . . | | | | | | | | 62.1 |
| 1916 . . . | | | | | | | | 85.3 |
| 17 . . . | | | | | | | | 64.1 |
| 18 . . . | | | | | | | | 27.6 |
| 19 . . . | | | | | | | | 106.0 |
| 20 . . . | | | | | | | | 49.0 |
| 1921 . . . | | | | | | | | 60.0 |
| 1922-23 . . . | | | | | | | | 68.3 |
| 23-24 . . . | | | | | | | | 72.0 |
| 24-25 . . . | | | | | | | | 80.9 |
| 25-26 . . . | | | | | | | | 43.9 |
| 20 Years' Mean | | | | | | | | 69.1 |

Note: The figures for the years 1906 to 1921 are for calendar years and those for the years 1922-23 to 1925-26 are for twelve months from May to April.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 2

River Godavari

Site Nandur Madhmeshwar

| Year | Mean discharge (Cusecs) | | | | | | Volume (Jun to Nov.) T.M.C. |
|----------------|-------------------------|--------|--------|--------|-------|-------|--------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1941-42 . . . | 426 | 24,815 | 3,282 | 1,168 | 782 | 394 | 82.5 |
| 42-43 . . . | 501 | 24,384 | 9,583 | 7,875 | 674 | 394 | 115.5 |
| 43-44 . . . | 274 | 15,760 | 6,546 | 4,318 | 5,795 | 159 | 87.5 |
| 44-45 . . . | 470 | 25,107 | 20,765 | 3,576 | 1,475 | 350 | 138.2 |
| 45-46 . . . | 676 | 13,996 | 11,063 | 5,126 | 1,156 | 328 | 86.2 |
| 1946-47 . . . | 321 | 6,325 | 17,599 | 7,558 | 892 | 489 | 88.1 |
| 47-48 . . . | 446 | 6,066 | 9,697 | 9,743 | 2,783 | 351 | 77.1 |
| 48-49 . . . | 484 | 8,936 | 8,372 | 2,451 | 946 | 309 | 57.3 |
| 49-50 . . . | 309 | 3,025 | 9,927 | 6,856 | 4,154 | 469 | 65.6 |
| 50-51 . . . | (434) | 24,766 | 6,847 | 7,186 | 1,899 | (360) | 110.3 |
| 1951-52 . . . | 711 | 2,537 | 10,606 | 688 | 2,165 | 398 | 45.6 |
| 52-53 . . . | 749 | 17,729 | 9,379 | 711 | 429 | 552 | 78.8 |
| 53-54 . . . | 1,176 | 3,531 | 21,439 | 1,682 | 1,063 | 560 | 78.6 |
| 54-55 . . . | 564 | 7,425 | 7,483 | 19,844 | 3,058 | 479 | 102.2 |
| 55-56 . . . | 695 | 1,003 | 10,162 | 9,871 | 4,937 | 965 | 78.0 |
| 1956-57 . . . | 419 | 17,139 | 19,614 | 1,428 | 8,392 | 376 | 134.5 |
| 57-58 . . . | 978 | 4,902 | 7,666 | 1,538 | 545 | 557 | 43.0 |
| 58-59 . . . | 712 | 17,289 | 7,174 | 10,799 | 1,037 | 629 | 99.7 |
| 59-60 . . . | 589 | 12,262 | 14,698 | 11,866 | 3,159 | 874 | 115.3 |
| 60-61 . . . | 337 | 2,582 | 5,841 | 2,948 | 512 | 356 | 33.3 |
| 20 Years' Mean | 564 | 11,980 | 10,887 | 6,012 | 2,293 | 467 | 85.5 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 2

River Godavari

Site Nandur Madhmeshwar

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|-------|-------|-------|-------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1941-42 . . . | 301 | 279 | 260 | 238 | 388 | 428 | 4.8 | 87.3 |
| 42-43 . . . | 378 | 177 | 434 | 260 | 388 | 409 | 5.3 | 120.8 |
| 43-44 . . . | 506 | 344 | 355 | 388 | 418 | 377 | 6.3 | 93.8 |
| 44-45 . . . | 332 | 380 | 368 | 328 | 494 | 444 | 6.2 | 144.4 |
| 45-46 . . . | 253 | 318 | 345 | 340 | 359 | 456 | 5.4 | 91.6 |
| 1946-47 . . . | 288 | 159 | 329 | 376 | 571 | 476 | 5.3 | 93.4 |
| 47-48 . . . | 342 | 362 | 396 | 433 | 553 | 482 | 6.8 | 83.9 |
| 48-49 . . . | 145 | 404 | 256 | 414 | 392 | 592 | 5.8 | 63.1 |
| 49-50 . . . | 497 | (311) | (339) | (350) | (427) | (455) | 6.1 | 71.7 |
| 50-51 . . . | (338) | 378 | 308 | 371 | 479 | 435 | 6.0 | 116.3 |
| 1951-52 . . . | 319 | 437 | 439 | 368 | 444 | 367 | 6.4 | 52.0 |
| 52-53 . . . | 230 | 319 | 222 | 290 | 254 | 286 | 4.3 | 83.1 |
| 53-54 . . . | 265 | 366 | 284 | 339 | 331 | 392 | 5.2 | 83.8 |
| 54-55 . . . | 308 | 416 | 404 | 528 | 445 | 547 | 7.0 | 109.2 |
| 55-56 . . . | 374 | 423 | 389 | (402) | (401) | 388 | 6.2 | 79.2 |
| 1956-57 . . . | 252 | 531 | 402 | 468 | 473 | 514 | 7.0 | 141.5 |
| 57-58 . . . | 594 | 442 | 456 | 406 | 439 | 336 | 7.0 | 50.0 |
| 58-59 . . . | 440 | 425 | 408 | 358 | 507 | 556 | 7.1 | 106.8 |
| 59-60 . . . | 982 | 568 | 360 | 537 | 313 | (436) | 8.4 | 123.7 |
| 60-61 . . . | 594 | 307 | 348 | 323 | 400 | 535 | 6.5 | 39.8 |
| 20 Years' Mean | 387 | 367 | 355 | 376 | 414 | 446 | 6.2 | 91.8 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 3

River Godavari

Site Puntumba

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|--------------|--------------|--------------|--------------|------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1950-51* | | | | | | | |
| 1951-52 . . . | 555 | 4,670 | 5,581 | 1,528 | 3,936 | 1,340 | 46.8 |
| 52-53 . . . | 383 | 18,713 | 5,876 | 813 | 460 | 48 | 70.2 |
| 53-54 . . . | 1,364 | 3,326 | (8,503) | 1,970 | 2,796 | 548 | 49.2 |
| 54-55 . . . | 323 | 6,556 | 4,735 | 11,548 | 2,840 | 154 | 69.0 |
| 55-56 . . . | 180 | 517 | 8,021 | 8,849 | 5,236 | 696 | 62.1 |
| 1956-57 . . . | 265 | 15,632 | 14,051 | 8,090 | 14,487 | 2,554 | 146.6 |
| 57-58 . . . | 1,712 | 4,270 | 6,652 | 1,469 | 253 | 144 | 38.5 |
| 58-59 . . . | 352 | 22,819 | 7,791 | 12,800 | 1,360 | 272 | 120.4 |
| 59-60 . . . | 1,619 | 10,935 | 14,054 | 11,051 | 3,194 | 832 | 110.5 |
| 60-61* . . . | 734 | 3,829 | 7,019 | 5,371 | 1,234 | 82 | 48.4 |
| 9 Years' Mean | 750 | 9,715 | 8,363 | 6,458 | 3,840 | 732 | 79.3 |

SERIAL No. 4

River Godavari

Site Toka

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|---------------|---------------|---------------|--------------|--------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1954-55 . . . | 1,470 | 7,343 | 7,499 | 13,909 | 7,224 | 277 | 101.0 |
| 55-56 . . . | 548 | 2,758 | 12,581 | 18,730 | 12,021 | 1,602 | 127.4 |
| 1956-57 . . . | 1,116 | 25,553 | 25,244 | 13,630 | 22,507 | 4,232 | 245.5 |
| 57-58 . . . | 4,647 | 9,260 | 12,149 | 3,442 | 624 | 322 | 80.7 |
| 58-59 . . . | 611 | 29,746 | 16,684 | 18,942 | 6,871 | 1,477 | 197.3 |
| 59-60 . . . | 2,935 | 20,014 | 26,172 | 22,077 | 8,487 | 2,666 | 218.1 |
| 60-61* . . . | 1,510 | 6,111 | 14,805 | 13,907 | 5,642 | 359 | 112.0 |
| 6 Years' Mean | 1,888 | 15,862 | 16,722 | 15,122 | 9,622 | 1,763 | 161.7 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 3

River Godavari

Site Puntumba

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1950-51* | | | | | 20 | 16 | | |
| 1951-52 | 134 | 83 | 69 | 62 | 32 | 36 | 1.2 | 48.0 |
| 52-53 | 43 | 39 | 34 | 22 | (15) | 16 | 0.4 | 70.6 |
| 53-54 | 57 | 74 | 59 | 47 | 25 | 14 | 0.7 | 49.9 |
| 54-55 | 192 | 210 | 217 | 79 | 62 | 76 | 2.2 | 71.2 |
| 55-56 | 169 | 108 | 91 | 63 | 33 | 208 | 1.8 | 63.9 |
| 1956-57 | 502 | 251 | 179 | 112 | 167 | 54 | 3.2 | 149.8 |
| 57-58 | 77 | 88 | 69 | 48 | 36 | 252 | 1.5 | 40.0 |
| 58-59 | 150 | 108 | 82 | 53 | 79 | 225 | 1.8 | 122.2 |
| 59-60 | 96 | 89 | 68 | 44 | 36 | 128 | 1.2 | 111.7 |
| 60.61* | 75 | | | | | | | |
| 9 Years' Mean | 157 | 117 | 96 | 59 | 54 | 112 | 1.6 | 80.8 |

SERIAL No. 4

River Godavari

Site Toka

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1954-55 | 409 | 484 | 368 | 175 | 120 | 118 | 4.4 | 105.4 |
| 55-56 | 520 | 395 | 323 | 253 | 149 | 949 | 6.9 | 134.3 |
| 1956-57 | 1,493 | 664 | 465 | 298 | 260 | 212 | 9.0 | 254.5 |
| 57-58 | 226 | 247 | 157 | 101 | 77 | 309 | 3.0 | 83.7 |
| 58-59 | 453 | 302 | 228 | 127 | 139 | 279 | 4.0 | 201.3 |
| 59-60 | 269 | 242 | 217 | 125 | 76 | 151 | 2.7 | 220.8 |
| 60.61* | 223 | | | | | | | |
| 6 Years' Mean | 558 | 389 | 293 | 180 | 137 | 336 | 5.0 | 166.7 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 5

River Godavari

Site Mungi

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C |
|----------------------|-------------------------|---------------|---------------|---------------|---------------|--------------|--------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1954-55 | 1,998 | 19,005 | 14,594 | 33,493 | 10,881 | 1,162 | 214.1 |
| 55-56 | 3,182 | 7,737 | 22,130 | 31,778 | 20,720 | 3,129 | 234.2 |
| 1956-57 | 3,987 | 31,488 | 23,953 | 26,875 | 29,718 | 9,570 | 332.9 |
| 57-58 | 11,874 | 25,549 | 37,936 | 13,189 | 3,771 | 500 | 246.4 |
| 58-59 | 3,708 | 45,522 | 31,571 | 38,970 | 7,069 | 2,242 | 341.8 |
| 59-60 | 4,813 | 24,629 | 35,003 | 34,585 | 15,223 | 3,416 | 311.6 |
| 60-61* | 6,550 | 11,709 | 20,665 | 23,989 | 8,746 | 503 | 190.6 |
| 6 Years' Mean | 4,927 | 25,655 | 27,531 | 29,816 | 14,564 | 3,336 | 280.2 |

SERIAL No. 6

River Godavari

Site Soan Bridge

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|---------------|----------------|----------------|---------------|---------------|---------------------------------------|
| | June | July | Aug. | Sep | Oct. | Nov. | |
| 1946-47 | 3,023 | 38,291 | 64,765 | 50,471 | 9,404 | 42,072 | 549.0 |
| 47-48 | 4,390 | 18,974 | 85,627 | 134,473 | 108,622 | 6,392 | 947.6 |
| 48-49 | 14,191 | 41,866 | 60,751 | 104,560 | 44,466 | 65,790 | 872.2 |
| 49-50 | 20,346 | 64,249 | 53,884 | 188,711 | 73,346 | 13,699 | 1,090.1 |
| 50-51 | 3,307 | 38,404 | 32,627 | 129,599 | 26,048 | 3,948 | 614.8 |
| 1951-52 | 21,075 | 103,877 | 66,105 | 27,216 | 38,842 | 5,149 | 697.8 |
| 52-53 | 6,606 | 43,321 | 45,320 | 19,560 | 11,107 | 2,257 | 340.8 |
| 53-54 | 41,813 | 34,127 | 99,433 | 89,181 | 69,367 | 7,224 | 902.0 |
| 54-55 | 10,961 | 57,533 | 75,038 | 124,228 | 99,101 | 7,741 | 991.0 |
| 55-56 | 35,580 | 63,118 | 238,625 | 147,505 | 70,947 | 17,174 | 1,517.2 |
| 1956-57 | 3,905 | 127,940 | 170,590 | 110,500 | 75,769 | 50,537 | 1,430.0 |
| 57-58 | 13,959 | 101,252 | 217,075 | 40,426 | 20,658 | 7,861 | 1,069.3 |
| 58-59 | 5,053 | 93,092 | 164,481 | 165,054 | 24,735 | 7,489 | 1,216.4 |
| 59-60 | 10,852 | 50,428 | 106,356 | 136,900 | 80,933 | 13,139 | 1,053.8 |
| 60-61 | 16,347 | 35,538 | 37,785 | 44,194 | 30,730 | 4,479 | 447.3 |
| 15 Years' Mean | 14,094 | 60,801 | 101,235 | 100,839 | 52,272 | 16,997 | 916.0 |

* Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 5

River Godavari

Site Mungi

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|-------------------|-------------------------|-------|------|------|------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1954-55 | 980 | 390 | 317 | 179 | 133 | 145 | 5.6 | 219.7 |
| 55-56 | 714 | 470 | 313 | 205 | 139 | 2,863 | 12.6 | 246.8 |
| 1956-57 | 2,881 | 2,567 | 757 | 438 | 343 | 316 | 19.3 | 352.2 |
| 57-58 | 176 | 303 | 216 | 157 | 129 | 168 | 2.9 | 249.3 |
| 58-59 | 1,244 | 395 | 269 | 157 | 145 | 239 | 6.5 | 348.3 |
| 59-60 | 466 | 293 | 214 | 133 | 79 | 188 | 3.6 | 315.2 |
| 60-61* | 299 | | | | | | | |
| 6 Years' Mean | 1,077 | 736 | 348 | 212 | 161 | 653 | 8.4 | 288.6 |

SERIAL No. 6

River Godavari

Site Soan Bridge

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|-------------------|-------------------------|-------|-------|-------|-------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1946-47 | 7,893 | 3,692 | 2,448 | 2,101 | 1,259 | 349 | 46.7 | 595.7 |
| 47-48 | 5,010 | 2,998 | 2,535 | 1,242 | 742 | 295 | 33.8 | 981.4 |
| 48-49 | 18,157 | 5,771 | 3,026 | 1,748 | 984 | 426 | 79.8 | 952.0 |
| 49-50 | 6,472 | 3,945 | 3,265 | 2,073 | 1,165 | 459 | 45.6 | 1,135.7 |
| 50-51 | 2,034 | 1,446 | 1,004 | 637 | 629 | 127 | 15.3 | 630.1 |
| 1951-52 | 2,823 | 1,468 | 1,832 | 795 | 428 | 190 | 19.8 | 717.5 |
| 52-53 | 1,104 | 747 | 589 | 313 | 184 | 69 | 7.9 | 348.7 |
| 53-54 | 2,863 | 1,941 | 1,341 | 1,117 | 1,729 | 465 | 24.8 | 926.8 |
| 54-55 | 4,138 | 2,860 | 2,533 | 1,526 | 959 | 567 | 33.0 | 1,624.0 |
| 55-56 | 6,550 | 4,382 | 2,801 | 2,500 | 1,380 | 624 | 48.2 | 1,565.4 |
| 1956-57 | 15,929 | 5,264 | 3,667 | 3,093 | 2,991 | 1,326 | 85.4 | 1,515.4 |
| 57-58 | 3,231 | 2,329 | 2,094 | 1,344 | 1,115 | 775 | 28.6 | 1,097.9 |
| 58-59 | 7,032 | 2,888 | 2,164 | 1,417 | 943 | 668 | 39.7 | 1,256.1 |
| 59-60 | 5,251 | 3,568 | 2,608 | 2,616 | 1,078 | 824 | 42.2 | 1,096.0 |
| 60-61 | 2,353 | 1,361 | 1,004 | 598 | 367 | 739 | 16.9 | 464.2 |
| 15 Years' Mean | 6,056 | 2,977 | 2,194 | 1,541 | 1,064 | 527 | 37.9 | 953.9 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 7

River Godavari

Site Mancherla

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T. M. C |
|---------------|-------------------------|---------|---------|---------|---------|--------|--|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1955-56 . . . | | | 357,767 | 224,235 | 159,701 | 19,872 | |
| 1956-57 . . . | 15,961 | 121,867 | 158,437 | 90,250 | 75,730 | 45,674 | 1,347.3 |
| 57-58 . . . | 7,650 | 42,326 | 180,770 | 45,163 | 22,161 | 9,748 | 819.2 |
| 58-59 . . . | 419 | 73,972 | 100,940 | 139,005 | 23,646 | 5,474 | 907.4 |
| 59-60 . . . | | 46,409 | 104,204 | 119,781 | 86,088 | 11,241 | |
| 60-61 . . . | | | | | | | |

SERIAL No. 8

River Godavari

Site Dummagudem

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|---------|---------|---------|---------|--------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1951-52 . . . | | | | | | | |
| 52-53 . . . | | | | | | | |
| 53-54 . . . | | 95,189 | 572,486 | 216,670 | 129,181 | 29,393 | |
| 54-55 . . . | | | | | | | |
| 55-56 . . . | | | | | | | |
| 1956-57 . . . | | | | | | | |
| 57-58 . . . | 9,625 | 210,805 | 577,130 | 171,418 | 39,086 | 22,645 | 2,743.0 |
| 58-59 . . . | | 228,792 | 388,220 | 334,518 | 150,766 | 31,543 | |
| 59-60 . . . | 16,881 | 357,926 | 793,665 | 595,626 | 187,402 | 37,002 | 5,270.0 |
| 60-61 . . . | 23,484 | 264,982 | 384,302 | 122,957 | 105,186 | 21,312 | 2,455.5 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 7

River Godavari

Site Mancherla

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|-------|-------|-------|-------|-----|--------------------|---------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | Dec. to May T.M.C. | Annual T.M.C. |
| 1955-56 . . . | 3,888 | 2,516 | 1,368 | 1,081 | 655 | 932 | 27.6 | |
| 1956-57 . . . | 12,077 | 5,143 | 3,142 | 3,114 | 2,202 | 612 | 69.3 | 1,416.6 |
| 57-58 . . . | 2,909 | 1,271 | 1,212 | 978 | 662 | 567 | 19.9 | 839.1 |
| 58-59 . . . | 7,070 | 2,090 | 1,159 | | | | | |
| 59-60 . . . | 86,087 | | | | | | | |
| 60-61 . . . | | | | | | | | |

SERIAL No. 8

River Godavari

Site Dummagudem

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|--------|-------|-------|-------|-------|--------------------|---------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | Dec. to May T.M.C. | Annual T.M.C. |
| 1951-52 . . . | | | | | | | | |
| 52-53 . . . | | | | | 1,040 | | | |
| 53-54 . . . | 10,433 | 6,579 | | | | | | |
| 54-55 . . . | | | | | | | | |
| 55-56 . . . | | | | | | | | |
| 1956-57 . . . | | | | | | | | |
| 57-58 . . . | 8,876 | 5,508 | 3,416 | 2,475 | 1,440 | | | |
| 58-59 . . . | 23,931 | 9,627 | 7,255 | 4,490 | 2,488 | 1,378 | 129.6 | |
| 59-60 . . . | 16,532 | 11,959 | 7,206 | 6,011 | 3,408 | 1,565 | 128.7 | 5,393.7 |
| 60-61 . . . | 11,008 | 6,877 | 5,060 | 3,173 | 1,664 | 1,171 | 76.0 | 2,881.5 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 9

River **Codavari**

Site **Dowlaishwaram**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|----------------|----------------|----------------|----------------|---------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct | Nov. | |
| 1901-02 . . . | 2,716 | 160,171 | 451,569 | 207,418 | 51,795 | 17,596 | 2,367.4 |
| 02-03 . . . | 1,291 | 80,281 | 81,470 | 310,118 | 30,988 | 15,334 | 1,363.0 |
| 03-04 . . . | 2,813 | 276,385 | 520,841 | 345,261 | 301,750 | 56,719 | 3,992.7 |
| 04-05 . . . | 14,081 | 145,548 | 148,291 | 284,320 | 81,407 | 15,441 | 1,818.5 |
| 05-06 . . . | 1,855 | 131,181 | 135,446 | 421,579 | 96,159 | 11,791 | 2,099.9 |
| 1906-07 . . . | 20,411 | 382,805 | 279,273 | 378,104 | 65,793 | 15,089 | 3,021.5 |
| 07-08 . . . | 41,866 | 1,221,604 | 638,864 | 232,590 | 27,042 | 8,559 | 5,789.0 |
| 08-09 . . . | 1,359 | 254,477 | 603,573 | 423,935 | 191,224 | 15,279 | 3,952.3 |
| 09-10 . . . | 14,333 | 336,991 | 275,646 | 182,221 | 45,528 | 8,377 | 2,294.0 |
| 10-11 . . . | 27,337 | 326,594 | 397,876 | 501,312 | 299,46 | 86,877 | 4,338.1 |
| 1911-12 . . . | 6,760 | 6,774 | 345,904 | 372,946 | 153,558 | 20,053 | 2,392.1 |
| 12-13 . . . | 2,549 | 161,804 | 552,452 | 310,014 | 51,956 | 8,824 | 2,885.4 |
| 13-14 . . . | 30,681 | 338,580 | 291,139 | 271,657 | 47,652 | 8,095 | 2,618.9 |
| 14-15 . . . | 83,673 | 420,767 | 598,650 | 735,147 | 133,361 | 10,566 | 5,237.4 |
| 15-16 . . . | 49,392 | 174,746 | 365,403 | 453,074 | 40,556 | 31,402 | 2,939.1 |
| 1916-17 . . . | 76,122 | 220,820 | 524,293 | 414,040 | 252,761 | 146,081 | 4,321.8 |
| 17-18 . . . | 69,348 | 360,672 | 375,062 | 716,146 | 412,050 | 103,211 | 5,377.8 |
| 18-19 . . . | 143,441 | 163,162 | 440,434 | 203,604 | 27,767 | 11,215 | 2,619.7 |
| 19-20 . . . | 135,417 | 263,963 | 500,299 | 256,559 | 210,947 | 33,333 | 3,714.4 |
| 20-21 . . . | 3,721 | 94,248 | 122,974 | 82,663 | 25,843 | 8,474 | 896.9 |
| 1921-22 . . . | 88,374 | 208,253 | 448,933 | 334,662 | 69,197 | 14,287 | 3,079.0 |
| 22-23 . . . | 8,431 | 279,477 | 225,394 | 492,456 | 44,788 | 32,250 | 2,854.2 |
| 23-24 . . . | 1,374 | 149,483 | 311,914 | 321,701 | 144,372 | 31,239 | 2,540.9 |
| 24-25 . . . | 1,769 | 30,833 | 221,974 | 377,543 | 214,566 | 32,120 | 2,318.3 |
| 25-26 . . . | 12,682 | 240,040 | 516,313 | 313,871 | 97,706 | 18,790 | 3,182.7 |
| 1926-27 . . . | 3,750 | 117,300 | 511,941 | 380,024 | 108,076 | 11,705 | 2,999.9 |
| 27-28 . . . | 98,414 | 455,461 | 403,674 | 207,035 | 161,235 | 34,621 | 3,614.4 |
| 28-29 . . . | 14,760 | 281,587 | 224,102 | 357,698 | 281,655 | 35,024 | 3,165.1 |
| 29-30 . . . | 36,957 | 250,314 | 259,515 | 391,415 | 125,596 | 14,460 | 2,849.7 |
| 30-31 . . . | 10,173 | 293,750 | 310,552 | 288,882 | 91,102 | 51,576 | 2,771.5 |
| 30 Years' Mean | 33,528 | 260,936 | 369,459 | 352,266 | 129,530 | 30,280 | 3,113.9 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 9

River Godavari

Site Dowlaishwaram

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|--------|--------|-------|-------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1901-02 . . . | 6,238 | 4,692 | 2,878 | 2,091 | 1,068 | 1,840 | 49.6 | 2,417.0 |
| 02-03 . . . | 7,919 | 5,537 | 3,142 | 2,071 | 966 | 731 | 53.6 | 1,416.6 |
| 03-04 . . . | 17,739 | 7,944 | 5,840 | 3,224 | 1,890 | 1,014 | 99.6 | 4,092.3 |
| 04-05 . . . | 7,925 | 5,500 | 3,987 | 2,157 | 1,421 | 1,855 | 60.0 | 1,878.5 |
| 05-06 . . . | 5,594 | 3,807 | 2,431 | 1,936 | 1,279 | 644 | 41.3 | 2,141.2 |
| 1906-07 . . . | 7,672 | 9,466 | 4,125 | 3,602 | 2,212 | 2,057 | 76.7 | 3,098.2 |
| 07-08 . . . | 5,161 | 4,850 | 3,363 | 2,559 | 4,022 | 1,946 | 57.7 | 5,846.7 |
| 08-09 . . . | 10,736 | 6,109 | 4,286 | 2,374 | 3,419 | 7,185 | 90.1 | 4,042.4 |
| 09-10 . . . | 5,925 | 9,459 | 4,092 | 2,109 | 1,384 | 1,327 | 63.9 | 2,357.9 |
| 10-11 . . . | 21,997 | 8,886 | 5,900 | 4,739 | 1,770 | 12 | 114.3 | 4,452.4 |
| 1911-12 . . . | 15,923 | 5,398 | 9,311 | 4,783 | 1,930 | 549 | 99.7 | 2,491.8 |
| 12-13 . . . | 4,943 | 5,609 | 3,078 | 2,762 | 1,888 | 955 | 50.5 | 2,935.9 |
| 13-14 . . . | 5,429 | 4,972 | 3,585 | 2,129 | 2,375 | 4,462 | 49.6 | 2,668.5 |
| 14-15 . . . | 5,819 | 5,318 | 5,315 | 5,514 | 4,314 | 925 | 71.2 | 5,308.6 |
| 15-16 . . . | 13,454 | 6,892 | 5,881 | 2,937 | 1,925 | 866 | 84.4 | 3,023.5 |
| 1916-17 . . . | 23,204 | 10,702 | 10,931 | 6,626 | 6,833 | 797 | 154.7 | 4,476.5 |
| 17-18 . . . | 17,073 | 10,231 | 9,509 | 8,541 | 7,091 | 8,897 | 161.2 | 5,539.0 |
| 18-19 . . . | 9,315 | 8,269 | 10,921 | 8,307 | 5,517 | 777 | 112.2 | 2,731.9 |
| 19-20 . . . | 13,553 | 9,392 | 8,492 | 4,703 | 2,546 | 1,061 | 104.8 | 3,819.2 |
| 20-21 . . . | 5,649 | 3,537 | 3,056 | 2,025 | 1,648 | 530 | 43.1 | 940.0 |
| 1921-22 . . . | 8,022 | 7,341 | 6,612 | 2,880 | 1,821 | 1,574 | 73.8 | 3,152.8 |
| 22-23 . . . | 16,720 | 8,949 | 5,794 | 3,845 | 2,542 | 772 | 101.8 | 2,956.0 |
| 23-24 . . . | 9,600 | 7,484 | 5,419 | 3,003 | 2,297 | 588 | 74.9 | 2,615.8 |
| 24-25 . . . | 12,696 | 6,264 | 4,941 | 3,337 | 2,459 | 9,236 | 102.8 | 2,421.1 |
| 25-26 . . . | 8,563 | 8,220 | 8,334 | 6,178 | 5,206 | 5,561 | 110.0 | 3,292.7 |
| 1926-27 . . . | 8,628 | 7,114 | 5,517 | 3,916 | 2,518 | 1,471 | 76.4 | 3,076.3 |
| 27-28 . . . | 12,766 | 7,274 | 6,930 | 4,872 | 2,838 | 1,223 | 94.8 | 3,709.2 |
| 28-29 . . . | 12,025 | 7,670 | 8,165 | 6,455 | 3,102 | 2,487 | 104.5 | 3,269.6 |
| 29-30 . . . | 7,442 | 7,671 | 4,883 | 3,385 | 2,999 | 3,517 | 78.5 | 2,928.2 |
| 30-31 . . . | 13,723 | 7,221 | 5,039 | 2,685 | 2,774 | 651 | 84.4 | 2,855.9 |
| 30 Years' Mean | 10,715 | 7,059 | 5,725 | 3,858 | 2,802 | 2,184 | 84.7 | 3,198.5 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 9

River **Codavari**

Site **Dowlaishwaram**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|----------------|----------------|----------------|----------------|---------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1931-32 . . . | 2,395 | 214,888 | 491,240 | 424,520 | 529,122 | 114,482 | 4,711.8 |
| 32-33 . . . | 11,644 | 419,283 | 418,257 | 380,706 | 87,718 | 58,417 | 3,646.6 |
| 33-34 . . . | 103,911 | 272,712 | 608,589 | 580,851 | 179,939 | 57,089 | 4,765.2 |
| 34-35 . . . | 8,244 | 335,220 | 673,502 | 386,494 | 212,870 | 67,362 | 4,469.8 |
| 35-36 . . . | 6,072 | 357,459 | 329,908 | 479,419 | 80,687 | 24,990 | 3,380.3 |
| 1936-37 . . . | 203,024 | 389,558 | 427,197 | 368,488 | 111,264 | 84,523 | 4,186.0 |
| 37-38 . . . | 6,939 | 354,390 | 336,753 | 269,073 | 162,137 | 31,143 | 3,081.6 |
| 38-39 . . . | 128,944 | 431,065 | 349,519 | 481,033 | 344,576 | 49,076 | 4,721.9 |
| 39-40 . . . | 2,964 | 186,748 | 295,325 | 301,777 | 75,877 | 34,643 | 2,374.1 |
| 40-41 . . . | 52,606 | 520,464 | 712,716 | 137,164 | 73,172 | 28,648 | 4,065.1 |
| 1941-42 . . . | 8,972 | 196,653 | 136,957 | 127,152 | 33,845 | 10,063 | 1,363.2 |
| 42-43 . . . | 23,524 | 439,735 | 563,365 | 375,592 | 55,315 | 18,028 | 3,916.1 |
| 43-44 . . . | 24,549 | 193,716 | 195,436 | 396,321 | 165,009 | 35,749 | 2,667.9 |
| 44-45 . . . | 4,057 | 334,319 | 579,880 | 302,279 | 129,463 | 71,750 | 3,775.4 |
| 45-46 . . . | 6,077 | 371,791 | 400,308 | 586,603 | 146,670 | 34,492 | 4,086.5 |
| 1946-47 . . . | 51,463 | 311,372 | 596,305 | 282,699 | 60,571 | 58,816 | 3,612.0 |
| 47-48 . . . | 4,656 | 298,853 | 412,122 | 502,411 | 260,167 | 36,400 | 4,009.6 |
| 48-49 . . . | 5,568 | 161,697 | 350,164 | 344,669 | 201,110 | 95,211 | 3,064.3 |
| 49-50 . . . | 19,401 | 285,555 | 395,102 | 420,403 | 328,037 | 91,463 | 4,078.7 |
| 50-51 . . . | 13,768 | 258,466 | 247,857 | 295,859 | 51,844 | 15,956 | 2,251.2 |
| 1951-52 . . . | 8,777 | 226,726 | 509,577 | 170,506 | 90,339 | 16,702 | 2,722.2 |
| 52-53 . . . | 2,306 | 105,664 | 330,878 | 270,439 | 113,358 | 16,106 | 2,221.5 |
| 53-54 . . . | 82,968 | 123,999 | 871,603 | 287,714 | 198,985 | 41,991 | 4,269.3 |
| 54-55 . . . | 27,485 | 273,790 | 370,033 | 378,504 | 177,206 | 22,528 | 3,309.7 |
| 55-56 . . . | 42,754 | 219,491 | 493,489 | 618,008 | 367,025 | 88,369 | 4,834.5 |
| 1956-57 . . . | 41,523 | 494,214 | 622,690 | 295,596 | 217,847 | 93,465 | 4,691.1 |
| 57-58 . . . | 8,431 | 284,545 | 712,648 | 317,652 | 53,704 | 34,119 | 3,748.4 |
| 58-59 . . . | 3,272 | 342,169 | 359,807 | 647,031 | 219,915 | 43,703 | 4,268.1 |
| 59-60 . . . | 13,683 | 376,598 | 934,712 | 1,155,493 | 243,193 | 50,646 | 7,325.4 |
| 60-61 . . . | 13,990 | 265,932 | 399,730 | 208,863 | 158,979 | 20,163 | 2,838.7 |
| 30 Years' Mean | 31,132 | 301,569 | 470,856 | 393,111 | 170,998 | 48,203 | 3,748.5 |
| 60 Years' Mean | 32,330 | 281,252 | 420,157 | 372,689 | 150,264 | 39,241 | 3,431.2 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 9

River Godavari

Site Dowlaiswaram

| Year | Mean discharge (Cusces) | | | | | | Volume | |
|----------------|-------------------------|--------|--------|--------|--------|--------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1931-32 . . . | 25,927 | 12,435 | 8,398 | 7,495 | 3,936 | 1,807 | 158.8 | 4,870.6 |
| 32-33 . . . | 18,210 | 9,949 | 8,631 | 6,729 | 3,732 | 5,740 | 139.4 | 3,786.0 |
| 33-34 . . . | 25,764 | 16,282 | 9,962 | 7,547 | 5,025 | 4,069 | 180.8 | 4,946.0 |
| 34-35 . . . | 20,050 | 13,013 | 10,019 | 6,913 | 3,635 | 5,612 | 155.7 | 4,625.5 |
| 35-36 . . . | 11,353 | 8,107 | 11,656 | 7,890 | 3,883 | 245 | 113.2 | 3,493.5 |
| 1936-37 . . . | 23,895 | 8,272 | 8,980 | 8,428 | 24,622 | 10,084 | 221.3 | 4,407.3 |
| 37-38 . . . | 12,402 | 8,382 | 8,295 | 5,027 | 3,994 | 2,403 | 106.1 | 3,187.7 |
| 38-39 . . . | 19,877 | 9,540 | 8,190 | 5,962 | 5,326 | 730 | 130.4 | 4,852.3 |
| 39-40 . . . | 10,190 | 6,522 | 7,089 | 4,596 | 3,274 | 6,553 | 101.0 | 2,475.1 |
| 40-41 . . . | 13,897 | 7,818 | 5,700 | 5,358 | 3,310 | 1,526 | 99.0 | 4,164.1 |
| 1941-42 . . . | 6,677 | 4,759 | 3,168 | 4,345 | 2,566 | 1,047 | 59.4 | 1,422.6 |
| 42-43 . . . | 9,524 | 12,518 | 12,017 | 4,997 | 3,033 | 1,728 | 114.0 | 4,030.1 |
| 43-44 . . . | 10,293 | 7,450 | 7,423 | 10,600 | 10,556 | 2,622 | 129.0 | 2,796.9 |
| 44-45 . . . | 17,625 | 10,456 | 7,736 | 5,013 | 3,278 | 2,030 | 121.2 | 3,896.6 |
| 45-46 . . . | 17,636 | 12,861 | 8,803 | 6,246 | 5,375 | 3,828 | 143.8 | 4,230.3 |
| 1946-47 . . . | 24,432 | 11,271 | 10,656 | 9,001 | 5,015 | 448 | 159.7 | 3,771.7 |
| 47-48 . . . | 16,302 | 12,850 | 9,933 | 6,472 | 3,625 | 2,224 | 135.7 | 4,145.3 |
| 48-49 . . . | 63,324 | 12,945 | 10,293 | 6,460 | 4,381 | 3,681 | 267.8 | 3,332.1 |
| 49-50 . . . | 19,141 | 11,978 | 9,866 | 9,146 | 6,794 | 2,429 | 155.9 | 4,234.6 |
| 50-51 . . . | 8,656 | 6,643 | 5,046 | 3,375 | 9,944 | 1,358 | 91.6 | 2,342.8 |
| 1951-52 . . . | 9,358 | 7,141 | 4,756 | 3,690 | 2,524 | 1,492 | 76.5 | 2,798.7 |
| 52-53 . . . | 10,122 | 6,707 | 4,821 | 2,934 | 2,219 | 1,536 | 74.6 | 2,296.1 |
| 53-54 . . . | 11,328 | 9,177 | 6,292 | 3,950 | 3,255 | 2,047 | 94.6 | 4,363.9 |
| 54-55 . . . | 10,821 | 8,245 | 5,956 | 4,122 | 2,883 | 3,824 | 94.2 | 3,403.9 |
| 55-56 . . . | 22,428 | 14,727 | 8,539 | 5,472 | 4,044 | 2,034 | 151.5 | 4,986.0 |
| 1956-57 . . . | 27,707 | 15,373 | 9,449 | 9,169 | 7,782 | 2,456 | 189.7 | 4,880.8 |
| 57-58 . . . | 11,694 | 7,871 | 6,171 | 5,022 | 3,427 | 4,539 | 101.9 | 3,850.3 |
| 58-59 . . . | 28,202 | 11,590 | 7,763 | 4,986 | 4,557 | 3,143 | 158.9 | 4,427.0 |
| 59-60 . . . | 17,615 | 11,895 | 9,556 | 6,727 | 5,588 | 4,052 | 146.4 | 7,471.8 |
| 60-61 . . . | 10,418 | 7,821 | 5,420 | 4,060 | 3,322 | 4,233 | 92.7 | 2,931.4 |
| 30 Years. Mean | 17,829 | 10,153 | 8,019 | 6,058 | 5,164 | 2,984 | 132.2 | 3,880.7 |
| 60 Years Mean | 14,272 | 8,606 | 6,872 | 4,958 | 3,983 | 2,584 | 108.4 | 3,539.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 10

River **Darna**

Site **Darna (Lake Beale)**

| Year | Mean Discharge Cusecs | | | | | | Volume (June to Nov.) |
|----------------|-----------------------|------|------|------|------|------|--------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906 | . | . | . | | | | |
| 07 | . | . | . | | | | |
| 08 | . | . | . | | | | |
| 09 | . | . | . | | | | |
| 10 | . | . | . | | | | |
| 1911 | . | . | . | | | | |
| 12 | . | . | . | | | | |
| 13 | . | . | . | | | | |
| 14 | . | . | . | | | | |
| 15 | . | . | . | | | | |
| 1916 | . | . | . | | | | |
| 17 | . | . | . | | | | |
| 18 | . | . | . | | | | |
| 19 | . | . | . | | | | |
| 20 | . | . | . | | | | |
| 1921 | . | . | . | | | | |
| 22 | . | . | . | | | | |
| 23-24* | . | . | . | | | | |
| 24-25* | . | . | . | | | | |
| 19 Years' Mean | | | | | | | |

*From 1st May to 30th April



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 10

River **Darna**

Site **Darna (Lake Beale)**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906 . . . | | | | | | | | 21.1 |
| 07 . . . | | | | | | | | 36.2 |
| 08 . . . | | | | | | | | 17.4 |
| 09 . . . | | | | | | | | 13.8 |
| 10 . . . | | | | | | | | 24.1 |
| 1911 . . . | | | | | | | | 16.4 |
| 12 . . . | | | | | | | | 28.0 |
| 13 . . . | | | | | | | | 41.0 |
| 14 . . . | | | | | | | | 30.6 |
| 15 . . . | | | | | | | | 19.2 |
| 1916 . . . | | | | | | | | 21.9 |
| 17 . . . | | | | | | | | 34.1 |
| 18 . . . | | | | | | | | 9.7 |
| 19 . . . | | | | | | | | 27.6 |
| 20 . . . | | | | | | | | 21.4 |
| 1921 . . . | | | | | | | | 25.8 |
| 22 . . . | | | | | | | | 29.2 |
| 23-24* . | | | | | | | | 21.3 |
| 24-25* . . . | | | | | | | | 21.2 |
| 19 Years' Mean | | | | | | | | 24.2 |

*From 1st May to 30th April.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 10

River **Darna**

Site **Darna (Lake Beale)**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|--------------|--------------|--------------|------------|------------|------------------------------------|
| | June | July | Aug. | Sept. | Oct. | Nov. | |
| 1941-42 . . . | 628 | 7,032 | 2,662 | 447 | 76 | 92 | 29.1 |
| 42-43 . . . | 605 | 11,977 | 2,983 | 2,163 | 17 | 107 | 47.6 |
| 43-44 . . . | 563 | 9,189 | 2,989 | 1,345 | 719 | 96 | 39.7 |
| 44-45 . . . | 348 | 10,855 | 7,961 | 1,804 | 27 | 123 | 56.4 |
| 45-46 . . . | 636 | 13,234 | 5,659 | 1,889 | 131 | 96 | 57.7 |
| 1946-47 . . . | 754 | 7,643 | 8,869 | 1,780 | 60 | 196 | 51.6 |
| 47-48 . . . | 138 | 3,577 | 4,414 | 4,125 | 294 | 88 | 33.5 |
| 48-49 . . . | 335 | 3,535 | 3,835 | 984 | 277 | 761 | 26.0 |
| 49-50 . . . | 54 | 3,206 | 5,538 | 4,004 | 630 | 115 | 35.9 |
| 50-51 . . . | (451) | 10,964 | 3,034 | 2,866 | 393 | (186) | 47.7 |
| 1951-52 . . . | 118 | 4,347 | 6,754 | 298 | 701 | 142 | 33.1 |
| 52-53 . . . | 1,000 | 10,731 | 3,367 | 245 | 98 | 397 | 42.2 |
| 53-54 . . . | 1,348 | 2,665 | 9,332 | 577 | 120 | 178 | 37.9 |
| 54-55 . . . | 357 | 6,138 | 3,895 | 7,994 | 402 | 67 | 49.7 |
| 55-56 . . . | 325 | 2,400 | 6,882 | 4,925 | 1,175 | 87 | 41.7 |
| 1956-57 . . . | 190 | 12,271 | 10,002 | 2,746 | 1,481 | 106 | 71.6 |
| 57-58 . . . | 1,062 | 12,387 | 6,567 | 678 | 75 | 53 | 55.7 |
| 58-59 . . . | 117 | 9,706 | 5,640 | 9,110 | 75 | 96 | 65.4 |
| 59-60 . . . | 107 | 11,251 | 7,848 | 4,937 | 506 | 122 | 65.9 |
| 60-61 . . . | 534 | 3,781 | 3,512 | 825 | 376 | 42 | 24.1 |
| 20 Years' Mean | 484 | 7,844 | 5,587 | 2,687 | 382 | 158 | 45.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No.10

River **Darna**

Site **Darna (Lake Beale)**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|-------|------|-------------------------|------------------|
| | Dec | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1941-42 . . . | 84 | 103 | 84 | 80 | 50 | 46 | 1.1 | 30.2 |
| 42-43 . . . | 84 | 65 | 99 | 130 | 115 | 61 | 1.4 | 49.0 |
| 43-44 . . . | 126 | 111 | 65 | 104 | 188 | 57 | 1.8 | 41.5 |
| 44-45 . . . | 50 | 134 | 73 | 115 | 160 | 84 | 1.6 | 58.0 |
| 45-46 . . . | 103 | 84 | 76 | 92 | 146 | 49 | 1.4 | 59.1 |
| 1946-47 . . . | 80 | 69 | 23 | 96 | 172 | 245 | 1.9 | 53.5 |
| 47-48 . . . | 88 | 80 | 57 | 60 | 99 | 95 | 1.3 | 34.8 |
| 48-49 . . . | 176 | 145 | 157 | 34 | 38 | 103 | 1.8 | 27.8 |
| 49-50 . . . | 84 | 115 | 38 | (84) | (113) | (84) | 1.3 | 37.2 |
| 50-51 . . . | (97) | 43 | 85 | 49 | 53 | 16 | 0.8 | 48.5 |
| 1951-52 . . . | 80 | 97 | 71 | 90 | 99 | 41 | 1.3 | 34.4 |
| 52-53 . . . | 59 | 75 | 116 | 109 | 146 | 41 | 1.5 | 43.7 |
| 53-54 . . . | 72 | 119 | 55 | 112 | 82 | 112 | 1.4 | 39.3 |
| 54-55 . . . | 64 | 72 | 70 | 32 | Nil | 13 | 0.7 | 50.4 |
| 55-56 . . . | 65 | 52 | 40 | 40 | 42 | 10 | 0.6 | 42.3 |
| 1956-57 . . . | 77 | 42 | (60) | (61) | (56) | (47) | 0.8 | 72.4 |
| 57-58 . . . | 57 | 46 | 19 | 19 | 34 | 15 | 0.5 | 56.2 |
| 58-59 . . . | 49 | 107 | 42 | 34 | 49 | 141 | 1.1 | 66.5 |
| 59-60 . . . | 57 | 54 | 42 | 26 | 34 | 34 | 0.7 | 66.6 |
| 60-61 . . . | 53 | 92 | 84 | 84 | 16 | 15 | 0.7 | 24.8 |
| 20 Years' Mean | 80 | 85 | 68 | 73 | 85 | 65 | 1.2 | 46.8 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 11

River Darna

Site Chehadi

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Dec) T.M.C. |
|---------------|-------------------------|--------|--------|-------|-------|------|-----------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1949-50 . . . | 155 | 2,105 | 4,234 | 5,469 | 1,940 | 178 | 37.2 |
| 50-51 . . . | 264 | 7,550 | 3,517 | 2,626 | 939 | 286 | 40.3 |
| 1951-52 . . . | 271 | 1,729 | 5,643 | 352 | 950 | 159 | 24.2 |
| 52-53* . . . | 9,539 | | 5,611 | 492 | 1,188 | 675 | |
| 53-54* . . . | 227 | 1,218 | | 515 | 286 | 402 | |
| 54-55* . . . | 240 | | 3,809 | | 767 | 81 | |
| 55-56 . . . | 388 | 768 | 5,841 | 4,061 | 1,878 | 145 | 34.6 |
| 1956-57 . . . | 315 | 11,760 | 6,398 | 2,453 | 3,142 | 180 | 94.7 |
| 57-58 . . . | 1,256 | 3,110 | 7,124 | 798 | 350 | 123 | 34.0 |
| 58-59 . . . | 231 | 9,820 | 3,263 | 4,468 | 185 | 270 | 48.4 |
| 59-60 . . . | 376 | 5,896 | 10,086 | 6,580 | 978 | 226 | 64.1 |
| 60-61* . . . | 118 | 2,150 | 3,146 | 1,084 | 317 | 272 | 18.8 |
| 8 Years' Mean | 407 | 5,342 | 5,763 | 3,351 | 1,295 | 196 | 43.4 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 11

River Darna

Site Chehadi

| Year | Mean discharge (Cusecs) | | | | | | Valume | |
|---------------|-------------------------|------|------|------|-------|-------|---------------------------|--------------------|
| | Dec, | Jan, | Feb, | Mar, | Apr, | May | (Dec. to May) T. M. C. | Annual T. M. C. |
| 1949-50 . . . | 190 | 250 | 224 | 204 | (274) | (360) | 3.9 | 41.1 |
| 50-51 . . . | 293 | 302 | 302 | 294 | 360 | (360) | 5.0 | 45.3 |
| 1951-52 . . . | 304 | 401 | 387 | 353 | 394 | 842 | 7.1 | 31.3 |
| 52-53* . . . | 1,462 | | | 280 | 269 | 238 | | |
| 53-54* . . . | 230 | | 207 | 329 | 369 | 362 | | |
| 54-55* . . . | 63 | 34 | 190 | 332 | 281 | 351 | 3.3 | |
| 55-56 . . . | 225 | 160 | 40 | 199 | 280 | 265 | 3.0 | 37.6 |
| 1956-57 . . . | 107 | 383 | 230 | 122 | 269 | 405 | 4.0 | 68.7 |
| 57-58 . . . | 168 | 86 | 177 | 160 | 151 | 193 | 2.3 | 36.3 |
| 58-59 . . . | 282 | 331 | 219 | 62 | 280 | 264 | 3.8 | 52.2 |
| 59-60 . . . | 302 | 401 | 334 | 335 | 181 | 189 | 4.6 | 68.7 |
| 60-61* . . . | 360 | | | | | | | |
| 8 Years' Mean | 234 | 289 | 239 | 216 | 274 | 360 | 4.2 | 47.6 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 12

River Aundh Nalla (Darna)

Site Padli (Mukne)

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|------|------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906-07 . . . | | | | | | | |
| 07-08 . . . | | | | | | | |
| 08-09 . . . | | | | | | | |
| 09-10 . . . | | | | | | | |
| 10-11 . . . | | | | | | | |
| 1911-12 . . . | | | | | | | |
| 12-13 . . . | | | | | | | |
| 13-14 . . . | | | | | | | |
| 14-15 . . . | | | | | | | |
| 15-16 . . . | | | | | | | |
| 1916-17 . . . | | | | | | | |
| 17-18 . . . | | | | | | | |
| 18-19 . . . | | | | | | | |
| 19-20 . . . | | | | | | | |
| 20-21 . . . | | | | | | | |
| 1921-22 . . . | | | | | | | |
| 22-23 . . . | | | | | | | |
| 23-24 . . . | | | | | | | |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 20 Years' Mean | | | | | | | |



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 12

River Aundh Nalla (Darna)

Site Padli (Mukne)

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906-07 . . . | | | | | | | | 6.8 |
| 07-08 . . . | | | | | | | | 11.0 |
| 08-09 . . . | | | | | | | | 5.3 |
| 09-10 . . . | | | | | | | | 15.0 |
| 10-11 . . . | | | | | | | | 12.0 |
| 1911-12 . . . | | | | | | | | 2.7 |
| 12-13 . . . | | | | | | | | 13.5 |
| 13-14 . . . | | | | | | | | 4.3 |
| 14-15 . . . | | | | | | | | 9.8 |
| 15-16 . . . | | | | | | | | 3.2 |
| 1916-17 . . . | | | | | | | | 3.7 |
| 17-18 . . . | | | | | | | | 4.0 |
| 18-19 . . . | | | | | | | | 1.6 |
| 19-20 . . . | | | | | | | | 4.0 |
| 20-21 . . . | | | | | | | | 4.0 |
| 1921-22 . . . | | | | | | | | 3.7 |
| 22-23 . . . | | | | | | | | Nil |
| 23-24 . . . | | | | | | | | 7.9 |
| 24-25 . . . | | | | | | | | 11.1 |
| 25-26 . . . | | | | | | | | 2.7 |
| 20 Years' Mean | | | | | | | | 6.3 |

Note : The figures for the years 1906-07 to 1919-20 are for seven months, June to December. The figures for the years 1922-23 to 1925-26 are for twelve months from May to April. The position regarding figures for 1920-21 and 1921-22 is not clear.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 12

River Aundh Nalla (Darna)

Site Padli (Mukne)

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|------------|------------|------------|-----------|-----------|------------------------------------|
| | June | July | Aug. | Seq. | Oct. | Nov. | |
| 1948-49 . . . | 12 | 555 | 314 | 166 | 63 | 560 | 4.4 |
| 49-50 . . . | Nil | 354 | 870 | 795 | 45 | 4 | 5.4 |
| 50-51 . . . | Nil | 2,355 | 540 | 824 | 56 | 2 | 9.9 |
| 1951-52 . . . | Nil | 211 | 535 | 47 | 269 | (20) | 2.9 |
| 52-53 . . . | (Nil) | 1,674 | 834 | 29 | 27 | 2 | 6.9 |
| 53-54 . . . | (Nil) | 469 | 1,720 | 28 | 36 | 10 | 6.1 |
| 54-55* . . . | Nil | | 464 | | 162 | 16 | |
| 55-56 . . . | Nil | 216 | 997 | 1,287 | 175 | 17 | 7.1 |
| 1956-57 . . . | | | | | | | |
| 57-58 . . . | | | | | | | |
| 58-59 . . . | Nil | 1,984 | 373 | 784 | 23 | 6 | 8.4 |
| 59-60 . . . | 4 | 1,591 | 1,022 | 841 | 133 | (15) | 9.6 |
| 60-61 . . . | Nil | 445 | 494 | 73 | 31 | 1 | 2.8 |
| 10 Years' Mean | 2 | 985 | 770 | 487 | 86 | 64 | 6.4 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 12

River **Aundh Nalla (Darna)**

Padli (Mukne)

| Year | Mean discharge (cusecs) | | | | | | Volume | |
|-----------------------|-------------------------|------------|------------|------------|------------|------------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1948-49 . . . | 25 | 2 | Nil | Nil | Nil | Nil | 0.1 | 4.5 |
| 49-50 . . . | 1 | Nil | 1 | Nil | Nil | Nil | Nil | 5.4 |
| 50-51 . . . | Nil | (Nil) | (Nil) | (Nil) | (Nil) | (Nil) | Nil | 9.9 |
| 1951-52 . . . | (Nil) | (Nil) | (Nil) | (Nil) | (Nil) | (Nil) | Nil | 2.9 |
| 52-53 . . . | 2 | 1 | 1 | (Nil) | (Nil) | (Nil) | Nil | 6.9 |
| 53-54 . . . | Nil | Nil | Nil | (Nil) | (Nil) | (Nil) | Nil | 6.1 |
| 54-55* . . . | 4 | 1 | Nil | Nil | Nil | Nil | Nil | |
| 55-56 . . . | 3 | 1 | Nil | (Nil) | (Nil) | (Nil) | Nil | 7.1 |
| 1956-57 . . . | | | | | | | | |
| 57-58* . . . | | | | | Nil | Nil | | |
| 58-59 . . . | 1 | Nil | Nil | Nil | Nil | Nil | Nil | 8.4 |
| 59-60 . . . | 2 | Nil | Nil | Nil | Nil | Nil | Nil | 9.6 |
| 60-61 . . . | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 2.8 |
| 10 Years' Mean | 3 | Nil | Nil | Nil | Nil | Nil | Nil | 6.4 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 13

River Karwa (Darna)

Site Pimpalgaon Dukra

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T. M. C. |
|----------------|-------------------------|-------|-------|-------|------|------|--|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1909-10 . . . | 65 | 772 | 377 | 289 | 135 | 6 | 4.4 |
| 10-11 . . . | 86 | 558 | 1,334 | 664 | 648 | 55 | 8.8 |
| 1911-12 . . . | 77 | (123) | 502 | 177 | 33 | 7 | 2.4 |
| 12-13 . . . | 4 | 1,088 | 626 | 166 | 171 | 34 | 5.6 |
| 13-14 . . . | 677 | 1,132 | 702 | 281 | 148 | (14) | 7.8 |
| 14-15 . . . | 374 | 2,117 | 1,931 | 828 | 119 | 14 | 14.3 |
| 15-16 . . . | | | | | | | |
| 1916-17 . . . | | | | | | | |
| 17-18 . . . | | | | | | | |
| 18-19 . . . | | | | | | | |
| 19-20 . . . | | | | | | | |
| 20-21 . . . | 122 | 678 | 302 | 93 | 43 | (12) | 3.2 |
| 1921-22 . . . | | | | | | | |
| 22-23 . . . | 177 | 589 | 449 | 97 | 34 | 36 | 3.8 |
| 23-24 . . . | 7 | 269 | 499 | 296 | 18 | 5 | 2.8 |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 9 Years' Mean | 177 | 814 | 747 | 321 | 150 | 20 | 5.9 |
| 1946-47 . . . | | | | | | | |
| 47-48 . . . | (48) | 347 | 301 | 413 | 64 | 6 | 3.1 |
| 48-49 . . . | 99 | 229 | 259 | 104 | 43 | 127 | 2.3 |
| 49-50 . . . | Nil | 58 | 183 | 238 | 219 | 14 | 1.9 |
| 50-51 . . . | (48) | 975 | 150 | 367 | 137 | 4 | 4.5 |
| 1951-52* . . . | 1 | | | | | | |
| 52-53 . . . | 56 | 584 | 454 | 25 | 34 | 19 | 3.1 |
| 53-54* . . . | 99 | | | 53 | 69 | 18 | |
| 54-55 . . . | 9 | 703 | 277 | 1,310 | 43 | 13 | 6.1 |
| 55-56 . . . | 1 | 203 | 524 | 569 | 254 | 29 | 4.2 |
| 1956-57 . . . | 1 | 1,102 | 707 | 332 | 464 | 40 | 7.1 |
| 57-58 . . . | 216 | 168 | 150 | 85 | 44 | 36 | 1.8 |
| 58-59 . . . | Nil | 1,717 | 274 | 354 | 35 | 23 | 6.4 |
| 10 Years' Mean | 48 | 609 | 328 | 380 | 134 | 31 | 4.0 |
| 19 Years' Mean | 109 | 706 | 526 | 352 | 141 | 26 | 4.9 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 13

River **Karwa (Darna)**

Site **Pimpalgaon Dukra**


| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|---------------|--------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) | Annual |
| | | | | | | | T.M.C. | T.M.C. |
| 1909-10 . . . | 4 | | | | | | Nil | 4.4 |
| 10-11 . . . | 5 | | | | | | Nil | 8.8 |
| 1911-12 . . . | 3 | | | | | | Nil | 2.4 |
| 12-13 . . . | 3 | | | | | | Nil | 5.6 |
| 13-14 . . . | 4 | | | | | | Nil | 7.8 |
| 14-15 . . . | 7 | | | | | | Nil | 14.3 |
| 15-16* . . . | | | | | | | | 6.0 |
| 1916-17* . . . | | | | | | | | 6.9 |
| 17-18* . . . | | | | | | | | 3.6 |
| 18-19* . . . | | | | | | | | 0.8 |
| 19-20* . . . | | | | | | | | 4.2 |
| 20-21 . . . | (7) | | | | | | Nil | 3.2 |
| 1921-22* . . . | | | | | | | | 2.7 |
| 22-23 . . . | 16 | | | | | | Nil | 3.8 |
| 23-24 . . . | 4 | | | | | | Nil | 2.8 |
| 24-25* . . . | | | | | | | | 4.0 |
| 25-26* . . . | | | | | | | | 2.3 |
| 9 Years' Mean | 6 | | | | | | Nil | 5.9 |
| 1946-47 . . . | | | | | | | | |
| 47-48 . . . | 5 | 4 | 3 | 3 | 2 | Nil | Nil | 3.1 |
| 48-49 . . . | (49) | 1 | 1 | Nil | Nil | Nil | 0.1 | 2.4 |
| 49-50 . . . | 15 | 13 | 4 | 1 | 1 | Nil | Nil | 1.9 |
| 50-51 . . . | 4 | 5 | 5 | 2 | 1 | Nil | Nil | 4.5 |
| 1951-52 . . . | | | | | | | | |
| 52-53 . . . | 28 | 21 | 13 | 9 | (1) | (1) | 0.2 | 3.3 |
| 53-54* . . . | 10 | 8 | 6 | 4 | 2 | 4 | Nil | |
| 54-55 . . . | 5 | 3 | 3 | 2 | 1 | 1 | Nil | 6.1 |
| 55-56 . . . | 16 | 10 | 6 | 5 | 3 | 1 | Nil | 4.2 |
| 1956-57 . . . | 19 | 9 | 3 | 2 | 2 | 1 | 0.1 | 7.2 |
| 57-58 . . . | 9 | 3 | 2 | 1 | 1 | 2 | Nil | 1.8 |
| 58-59 . . . | 6 | (8) | (4) | (3) | (1) | (1) | Nil | 6.4 |
| 10 Years' Mean | 16 | 8 | 4 | 3 | 1 | 1 | Nil | 4.1 |
| 19 Years' Mean | 11 | | | | | | | |

*Not considered for calculating the average.

SERIAL No. 14

Site **Nasik Road**

27 228
95 223
08 155



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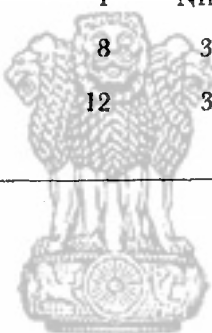
MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 14

River Waldevi (Darna)

Site Nasik Read

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-----------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | Dec. to May T.M.C. | Annual T.M.C. |
| 1955-56 . . . | | 9 | 5 | 3 | 2 | 3 | | |
| 1956-57 . . . | 23 | 16 | 10 | 7 | 1 | 1 | 0.1 | |
| 57-58 . . . | 5 | 2 | 1 | Nil | | | | |
| 58-59 . . . | 19 | 9 | 8 | 3 | 1 | Nil | 0.1 | |
| 59-60 . . . | 23 | 17 | 12 | 3 | 2 | 1 | 0.1 | 2.7 |
| 60-61 . . . | 2 | | | | | | | |



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MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 15

River **Kadwa**

Site **Lakhamapur**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------|------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906 . . . | | | | | | | |
| 07 . . . | | | | | | | |
| 08 . . . | | | | | | | |
| 09 . . . | | | | | | | |
| 10 . . . | | | | | | | |
| 1911 . . . | | | | | | | |
| 12 . . . | | | | | | | |
| 13 . . . | | | | | | | |
| 14 . . . | | | | | | | |
| 15 . . . | | | | | | | |
| 1916 . . . | | | | | | | |
| 17 . . . | | | | | | | |
| 18 . . . | | | | | | | |
| 19 . . . | | | | | | | |
| 20 . . . | | | | | | | |
| 1921 . . . | | | | | | | |
| 1922-23* . . . | | | | | | | |
| 23-24* . . . | | | | | | | |
| 24-25* . . . | | | | | | | |
| 25-26* . . . | | | | | | | |
| 20 Years' Mean | | | | | | | |

*From 1st May to 30th April.



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 15

River Kadwa

Site Lakhamapur

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | Dec. to May) T.M.C. | Annual T.M.C. |
| 1906 . . . | | | | | | | | 4.7 |
| 07 . . . | | | | | | | | 10.0 |
| 08 . . . | | | | | | | | 8.4 |
| 09 . . . | | | | | | | | 10.4 |
| 10 . . . | | | | | | | | 7.5 |
| 1911 . . . | | | | | | | | 3.7 |
| 12 . . . | | | | | | | | 9.7 |
| 13 . . . | | | | | | | | 14.5 |
| 14 . . . | | | | | | | | 24.7 |
| 15 . . . | | | | | | | | 7.5 |
| 1916 . . . | | | | | | | | 8.0 |
| 17 . . . | | | | | | | | 7.7 |
| 18 . . . | | | | | | | | 3.0 |
| 19 . . . | | | | | | | | 9.7 |
| 20 . . . | | | | | | | | 2.5 |
| 1921 . . . | | | | | | | | 5.4 |
| 1922-23* . . . | | | | | | | | 6.9 |
| 23-24* . . . | | | | | | | | 8.2 |
| 24-25* . . . | | | | | | | | 7.1 |
| 25-26* . . . | | | | | | | | 4.2 |
| 20 Years' Mean | | | | | | | | 8.2 |

*From 1st May to 30th April.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 15

River **Kadwa**

Site **Lakhamapur**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------------|------------|------------|------------|-----------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1948-49 . . . | (4) | 1,181 | 407 | 244 | 22 | 42 | 5.1 |
| 49-50 . . . | 5 | 49 | 662 | 1,278 | 354 | 8 | 6.1 |
| 50-51 . . . | 1 | 1,431 | 145 | 72 | 72 | 66 | 4.8 |
| 1951-52 . . . | 24 | 57 | 454 | 73 | 105 | 51 | 2.1 |
| 52-53 . . . | 587 | 1,585 | 1,131 | 53 | 43 | 30 | 9.0 |
| 53-54 . . . | 311 | 591 | 2,626 | 54 | 27 | 7 | 9.6 |
| 54-55 . . . | 4 | 341 | 439 | 1,260 | 174 | 26 | 6.0 |
| 55-56 . . . | (4) | 40 | 578 | 601 | 262 | 37 | 4.0 |
| 1956-57 . . . | 3 | 1,604 | 2,267 | 725 | 523 | 36 | 13.8 |
| 57-58 . . . | 11 | 110 | (903) | 71 | 17 | 5 | 2.9 |
| 58-59 . . . | 3 | 2,334 | 287 | 1,924 | 116 | 19 | 12.4 |
| 59-60 . . . | 78 | 1,283 | 942 | 480 | 281 | 47 | 8.2 |
| 60-61* . . . | 2 | 62 | 580 | | | 3 | |
| 12 Years' Mean | 86 | 884 | 903 | 570 | 166 | 31 | 7.0 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 15

River **Kadwa**

Site **Lakhamapur**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1948-49 . . . | 9 | 8 | 4 | 4 | 4 | 6 | Nil | 5.1 |
| 49-50 . . . | 7 | 8 | 5 | 3 | 2 | 1 | Nil | 6.1 |
| 50-51 . . . | 45 | 24 | 10 | 3 | 1 | Nil | 0.2 | 5.0 |
| 1951-52 . . . | 27 | (6) | (3) | (2) | (3) | (2) | 0.1 | 2.2 |
| 52-53 . . . | 20 | 1 | 1 | 2 | 1 | 1 | 0.1 | 9.1 |
| 53-54 . . . | 4 | 3 | 2 | 2 | 1 | 1 | Nil | 9.6 |
| 54-55 . . . | 12 | 9 | 4 | 3 | 3 | 3 | Nil | 6.0 |
| 55-56 . . . | 8 | 5 | 3 | 3 | 2 | 1 | Nil | 4.0 |
| 1956-57 . . . | 13 | 3 | 3 | 2 | 2 | 1 | Nil | 13.8 |
| 57-58 . . . | 3 | 2 | 2 | 1 | 9 | 1 | Nil | 2.9 |
| 58-59 . . . | 8 | 2 | 2 | 1 | Nil | 1 | Nil | 12.4 |
| 59-60 . . . | 8 | 4 | 2 | 2 | 1 | 126 | 0.3 | 8.5 |
| 60-61* . . . | 2 | 1 | 2 | 1 | Nil | 1 | Nil | |
| 12 Years' Mean | 14 | 6 | 3 | 2 | 2 | 12 | 0.1 | 7.1 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 16

River Kadwa

Site Plakhed (Weir)

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C |
|----------------|-------------------------|------|------|------|------|------|--------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906-07 . . . | | | | | | | |
| 07-08 . . . | | | | | | | |
| 08-09 . . . | | | | | | | |
| 09-10 . . . | | | | | | | |
| 10-11 . . . | | | | | | | |
| 1911-12 . . . | | | | | | | |
| 12-13 . . . | | | | | | | |
| 13-14 . . . | | | | | | | |
| 14-15 . . . | | | | | | | |
| 15-16 . . . | | | | | | | |
| 1916-17 . . . | | | | | | | |
| 17-18 . . . | | | | | | | |
| 18-19 . . . | | | | | | | |
| 19-20 . . . | | | | | | | |
| 20-21 . . . | | | | | | | |
| 1921-22 . . . | | | | | | | |
| 22-23 . . . | | | | | | | |
| 23-24 . . . | | | | | | | |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 20 Years' Mean | | | | | | | |



सत्यमेव जयते

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 16

iver Kadwa

Site Palkhed (Weir)

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906-07 . . . | | | | | | | | 11.7 |
| 07-08 . . . | | | | | | | | 36.4 |
| 08-09 . . . | | | | | | | | 20.2 |
| 09-10 . . . | | | | | | | | 15.7 |
| 10-11 . . . | | | | | | | | 19.7 |
| 1911-12 . . . | | | | | | | | 12.2 |
| 12-13 . . . | | | | | | | | 37.2 |
| 13-14 . . . | | | | | | | | 26.2 |
| 14-15 . . . | | | | | | | | 62.9 |
| 15-16 . . . | | | | | | | | 28.6 |
| 1916-17 . . . | | | | | | | | 22.9 |
| 17-18 . . . | | | | | | | | 36.9 |
| 18-19 . . . | | | | | | | | 10.5 |
| 19-20 . . . | | | | | | | | 38.3 |
| 20-21 . . . | | | | | | | | 7.3 |
| 1921-22 . . . | | | | | | | | 24.1 |
| 22-23 . . . | | | | | | | | 19.1 |
| 23-24 . . . | | | | | | | | 16.5 |
| 24-25 . . . | | | | | | | | 17.1 |
| 25-26 . . . | | | | | | | | 8.6 |
| 20 Years' Mean | | | | | | | | 23.6 |

Note : The figures for the years 1906-07 to 1919-20 are for five months, June to October and those for the years 1922-23 to 1925-26 are for twelve months from May to April. The position regarding the figures for 1920-21 and 1921-22 is not clear.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 16

River **Kadwa**

Site **Palkhed (Weir)**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T. M. C |
|----------------|-------------------------|-------|-------|-------|-------|------|--|
| | June | July | Aug. | Sep. | Oct | Nov. | |
| 1941-42 . . . | Nil | 1,055 | 126 | 10 | Nil | 7 | 3.1 |
| 42-43 . . . | Nil | 1,044 | 1,531 | 293 | 54 | 7 | 7.8 |
| 43-44 . . . | Nil | 619 | 619 | 686 | 460 | 25 | 6.5 |
| 44-45 . . . | 7 | 4,754 | 3,697 | 851 | 232 | 54 | 25.5 |
| 45-46 . . . | 342 | 3,897 | 2,146 | 2,167 | 221 | 30 | 23.3 |
| 1946-47 . . . | 10 | 1,302 | 2,885 | 1,764 | 124 | 11 | 16.1 |
| 47-48 . . . | 1 | 776 | 1,101 | 2,536 | 302 | 28 | 12.5 |
| 48-49 . . . | 3 | 2,105 | 1,950 | 392 | 229 | Nil | 12.4 |
| 49-50 . . . | 3 | 497 | 1,637 | 3,226 | 828 | 182 | 16.8 |
| 50-51 . . . | 1 | 6,335 | 1,756 | 1,216 | 531 | 23 | 26.4 |
| 1951-52 . . . | 41 | 241 | 1,080 | 271 | 291 | 49 | 5.2 |
| 52-53 . . . | 123 | 2,027 | 1,135 | 278 | 50 | 16 | 9.5 |
| 53-54 . . . | 5 | 1,061 | 4,199 | 545 | 165 | 9 | 15.8 |
| 54-55 . . . | 4 | 1,221 | 1,245 | 4,814 | 799 | 35 | 21.3 |
| 55-56 . . . | 6 | 384 | 2,075 | 2,204 | 1,387 | 32 | 16.1 |
| 1956-57 . . . | 41 | 5,363 | 4,840 | 1,357 | 1,981 | 6 | 36.3 |
| 57-58 . . . | 8 | 952 | 2,261 | 612 | 610 | 41 | 11.9 |
| 58-59 . . . | 41 | 6,317 | 2,009 | 3,405 | 3,338 | 36 | 40.2 |
| 59-60 . . . | 159 | 2,706 | 4,827 | 2,642 | 2,605 | 471 | 35.5 |
| 60-61 . . . | 12 | 1,013 | 2,429 | 1,051 | 1,044 | 21 | 14.8 |
| 20 Years' Mean | 40 | 2,183 | 2,177 | 1,516 | 763 | 54 | 17.9 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 16

River Kadwa

Site Palkhed (Weir)

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1941-42 . . . | Nil | Nil | 1 | Nil | Nil | Nil | Nil | 3.1 |
| 42-43 . . . | 31 | 1 | Nil | Nil | Nil | Nil | 0.1 | 7.9 |
| 43-44 . . . | 17 | 1 | Nil | Nil | 2 | Nil | Nil | 6.5 |
| 44-45 . . . | 12 | 3 | 2 | Nil | Nil | 2 | Nil | 25.5 |
| 45-46 . . . | 16 | 6 | 6 | Nil | Nil | Nil | Nil | 23.3 |
| 1946-47 . . . | 13 | 14 | 4 | Nil | 1 | Nil | Nil | 16.1 |
| 47-48 . . . | 13 | 15 | 6 | 4 | 2 | Nil | Nil | 12.5 |
| 48-49 . . . | 8 | 4 | 1 | Nil | Nil | Nil | Nil | 12.4 |
| 49-50 . . . | 21 | 6 | Nil | Nil | Nil | Nil | 0.1 | 16.9 |
| 50-51 . . . | 21 | 15 | 9 | 1 | 6 | 8 | 0.1 | 26.5 |
| 1951-52 . . . | 22 | 20 | 17 | 6 | 2 | 3 | 0.2 | 5.4 |
| 52-53 . . . | 9 | 12 | 3 | 2 | 3 | 7 | Nil | 9.5 |
| 53-54 . . . | 11 | 8 | 3 | 1 | 6 | 5 | Nil | 15.8 |
| 54-55 . . . | 11 | 9 | 5 | 8 | 4 | 3 | Nil | 21.3 |
| 55-56 . . . | 30 | 10 | 9 | 14 | (8) | 9 | 0.1 | 16.2 |
| 1956-57 . . . | 30 | 32 | 16 | 16 | 25 | 13 | 0.3 | 36.6 |
| 57-58 . . . | 198 | 7 | 6 | 3 | 6 | 32 | 0.6 | 12.5 |
| 58-59 . . . | 40 | 21 | 17 | 16 | 12 | 7 | 0.2 | 40.4 |
| 59-60 . . . | 169 | Nil | 10 | 8 | 9 | 4 | 0.5 | 36.0 |
| 60-61 . . . | 12 | 13 | 3 | 1 | Nil | 5 | Nil | 14.8 |
| 20 Years' Mean | 34 | 10 | 6 | 4 | 4 | 5 | 0.1 | 18.0 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 17

River Unanda (Kadwa)

Site Ozarkhed

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|------|------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906-07 . . . | | | | | | | |
| 07-08 . . . | | | | | | | |
| 08-09 . . . | | | | | | | |
| 09-10 . . . | | | | | | | |
| 10-11 . . . | | | | | | | |
| 1911-12 . . . | | | | | | | |
| 12-13 . . . | | | | | | | |
| 13-14 . . . | | | | | | | |
| 14-15 . . . | | | | | | | |
| 15-16 . . . | | | | | | | |
| 1916-17 . . . | | | | | | | |
| 17-18 . . . | | | | | | | |
| 18-19 . . . | | | | | | | |
| 19-20 . . . | | | | | | | |
| 20-21 . . . | | | | | | | |
| 1921-22 . . . | | | | | | | |
| 22-23 . . . | | | | | | | |
| 23-24 . . . | | | | | | | |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 20 Years' Mean | | | | | | | |



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 17

River Unanda (Kadwa)

Site Ozarkhed

| Year | Mean discharge (Cusces) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906-07 . . . | | | | | | | | 2.0 |
| 07-08 . . . | | | | | | | | 3.2 |
| 08-09 . . . | | | | | | | | 2.0 |
| 09-10 . . . | | | | | | | | 3.9 |
| 10-11 . . . | | | | | | | | 4.9 |
| 1911-12 . . . | | | | | | | | 1.7 |
| 12-13 . . . | | | | | | | | 3.0 |
| 13-14 . . . | | | | | | | | 3.2 |
| 14-15 . . . | | | | | | | | 17.7 |
| 15-16 . . . | | | | | | | | 3.2 |
| 1916-17 . . . | | | | | | | | 2.3 |
| 17-18 . . . | | | | | | | | 3.6 |
| 18-19 . . . | | | | | | | | 0.9 |
| 19-20 . . . | | | | | | | | 9.8 |
| 20-21 . . . | | | | | | | | 0.5 |
| 1921-22 . . . | | | | | | | | 1.7 |
| 22-23 . . . | | | | | | | | 2.2 |
| 23-24 . . . | | | | | | | | 4.4 |
| 24-25 . . . | | | | | | | | 4.1 |
| 25-26 . . . | | | | | | | | 2.8 |
| 20 Years' Mean | | | | | | | | 3.9 |

Note : The figures for the years 1906.07 to 1919-20 are for seven months, June to December. The figures for the years 1922-23 to 1925-26 are for twelve months from May to April. The position regarding the figures for 1920 and 1921 is not clear.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 17

River Unanda (Kadwa)

Site Ozarkhed

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------------|------------|------------|-----------|-----------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1948-49 . . . | 3 | 150 | 81 | 40 | 13 | 17 | 0.7 |
| 49-50 . . . | 2 | 65 | 160 | 1,930 | 52 | 18 | 5.7 |
| 50-51 . . . | 1 | 1,755 | 67 | 18 | 19 | 17 | 5.0 |
| 1951-52 . . . | 12 | 235 | 397 | 45 | 45 | (11) | 1.9 |
| 52-53 . . . | 137 | 1,239 | 397 | 53 | 17 | 4 | 4.9 |
| 53-54 . . . | 1 | 144 | 1,507 | 107 | 23 | 3 | 4.8 |
| 54-55 . . . | 259 | 136 | 177 | 692 | 239 | 11 | 4.0 |
| 55-56 . . . | 1 | 14 | 257 | 746 | 220 | 16 | 3.2 |
| 1956-57 . . . | | | | | | | |
| 57-58 . . . | 36 | 53 | 260 | 83 | 9 | 4 | 1.1 |
| 58-59 . . . | 2 | 1,383 | 133 | 855 | 38 | 11 | 6.4 |
| 59-60 . . . | 73 | 325 | 924 | 468 | 84 | 19 | 5.0 |
| 60-61 . . . | 1 | 33 | 118 | 55 | 8 | 2 | 0.5 |
| 12 Years' Mean | 44 | 461 | 373 | 424 | 64 | 11 | 3.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 17

River Unanda (Kadwa)

Site Ozarkhed

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|-------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1948-49 . . . | 6 | 3 | 1 | 1 | 1 | Nil | Nil | 0.7 |
| 49-50 . . . | 5 | 3 | 2 | 1 | 1 | 1 | Nil | 5.7 |
| 50-51 . . . | 18 | (2) | 1 | 1 | Nil | Nil | Nil | 5.0 |
| 1951-52 . . . | (5) | (2) | (1) | (1) | (Nil) | (Nil) | Nil | 1.9 |
| 52-53 . . . | 2 | 1 | 1 | Nil | Nil | Nil | Nil | 4.9 |
| 53-54 . . . | 2 | 2 | 1 | Nil | Nil | Nil | Nil | 4.8 |
| 54-55 . . . | 5 | 3 | 2 | 1 | Nil | Nil | Nil | 4.0 |
| 55-56 . . . | 5 | (2) | (1) | (1) | (Nil) | (Nil) | Nil | 3.2 |
| 1956-57* . . . | | 3 | 2 | 1 | 1 | Nil | | |
| 57-58 . . . | 2 | 1 | Nil | Nil | Nil | Nil | Nil | 1.1 |
| 58-59 . . . | 4 | 2 | 1 | Nil | Nil | Nil | Nil | 6.4 |
| 59-60 . . . | 6 | 3 | 1 | 1 | Nil | Nil | Nil | 5.0 |
| 60-61 . . . | 2 | Nil | Nil | Nil | Nil | 1 | Nil | 0.5 |
| 12 Years' Mean | 5 | 2 | 1 | 1 | Nil | Nil | Nil | 3.6 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 18

River **Kolwan (Kadwa)**

Site **Waghad**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|-------|-------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1941-42 . . . | 125 | 461 | 178 | 16 | Nil | 8 | 2.0 |
| 42-43 . . . | 139 | 1,048 | 219 | 294 | 3 | 10 | 4.6 |
| 43-44 . . . | 37 | 761 | 223 | 69 | 74 | 9 | 3.1 |
| 44-45 . . . | 88 | 440 | 713 | 18 | 13 | 8 | 3.3 |
| 45-46 . . . | 9 | 292 | 263 | 122 | 3 | 7 | 1.8 |
| 1946-47 . . . | 6 | 535 | 423 | 164 | Nil | 13 | 2.9 |
| 47-48 . . . | 4 | 196 | 416 | 411 | 7 | 6 | 2.7 |
| 48-49 . . . | 46 | 403 | 301 | 29 | 6 | 34 | 2.2 |
| 49-50 . . . | Nil | 117 | 258 | 423 | 17 | 7 | 2.1 |
| 50-51 . . . | Nil | 1,066 | 395 | 263 | 63 | 8 | 4.9 |
| 1951-52 . . . | 3 | 104 | 262 | 15 | 30 | 14 | 1.1 |
| 52-53 . . . | 39 | 1,829 | 1,348 | 9 | 2 | 3 | 8.6 |
| 53-54 . . . | 90 | 587 | 1,164 | 26 | 6 | 9 | 5.0 |
| 54-55 . . . | 4 | 340 | 297 | 490 | 35 | 7 | 3.1 |
| 55-56 . . . | Nil | 97 | 534 | 356 | 253 | Nil | 3.3 |
| 1956-57 . . . | Nil | 248 | 132 | 99 | 187 | 13 | 1.9 |
| 57-58 . . . | Nil | 118 | 229 | 26 | 4 | 7 | 1.0 |
| 58-59 . . . | 2 | 828 | 268 | 304 | 16 | 17 | 3.7 |
| 59-60 . . . | 23 | 562 | 540 | 288 | 35 | 11 | 3.8 |
| 60-61 . . . | 17 | 15 | 362 | 66 | Nil | (9) | 1.2 |
| 20 Years' Mean | 32 | 502 | 426 | 174 | 38 | 10 | 3.1 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 18

River **Kolwan (Kadwa)**

Site **Waghad**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1941-42 . . . | 15 | 11 | 12 | 10 | 5 | 11 | Nil | 2.0 |
| 42-43 . . . | 10 | 10 | 7 | 10 | 15 | 11 | Nil | 4.6 |
| 43-44 . . . | 10 | 9 | 8 | 8 | 2 | 1 | Nil | 3.1 |
| 44-45 . . . | 7 | 6 | 9 | 7 | 3 | 9 | Nil | 3.3 |
| 45-46 . . . | 7 | 6 | 4 | 7 | 3 | 5 | Nil | 1.8 |
| 1946-47 . . . | 9 | 6 | 7 | 11 | 7 | 5 | Nil | 2.9 |
| 47-48 . . . | 9 | 8 | 10 | 6 | 1 | 2 | Nil | 2.7 |
| 48-49 . . . | 7 | 15 | 11 | 12 | 5 | 4 | Nil | 2.2 |
| 49-50 . . . | 4 | 2 | 5 | 8 | 5 | Nil | Nil | 2.1 |
| 50-51 . . . | 5 | 1 | 4 | 2 | 5 | Nil | Nil | 4.9 |
| 1951-52 . . . | 6 | 5 | 3 | 3 | 2 | Nil | Nil | 1.1 |
| 52-53 . . . | 4 | 5 | 3 | 1 | Nil | Nil | Nil | 8.6 |
| 53-54 . . . | 5 | 11 | 5 | 10 | 2 | 7 | Nil | 5.0 |
| 54-55 . . . | 8 | Nil | 5 | 5 | Nil | Nil | Nil | 3.1 |
| 55-56 . . . | Nil | 7 | 8 | 5 | 6 | 2 | Nil | 3.3 |
| 1956-57 . . . | 10 | (5) | (4) | (4) | (2) | (3) | Nil | 1.9 |
| 57-58 . . . | 4 | 4 | Nil | Nil | Nil | 2 | Nil | 1.0 |
| 58-59 . . . | 6 | 5 | 4 | 3 | Nil | 3 | Nil | 3.7 |
| 59-60 . . . | 6 | 5 | 5 | 5 | 6 | 7 | Nil | 3.8 |
| 60-61 . . . | 6 | 7 | 7 | Nil | (2) | 6 | Nil | 1.2 |
| 20 Years' Mean | 7 | 6 | 6 | 6 | 4 | 4 | Nil | 3.1 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL NO. 19

River **Odal (Kadwa)**

Site **Khadakozar**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------------|------------|-----------|-----------|-----------|--|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906-07 . . . | 71 | 23 | 89 | 43 | 6 | 3 | 0.4 |
| 07-08 . . . | 6 | 9 | 144 | 20 | 3 | 1 | 0.5 |
| 08-09 . . . | 8 | 5 | 36 | 19 | 1 | Nil | 0.1 |
| 09-10 . . . | 729 | 12 | 57 | 106 | 35 | 6 | 2.5 |
| 10-11 . . . | 16 | 47 | 131 | 69 | 414 | 43 | 1.9 |
| 1911-12 . . . | 173 | 26 | 66 | 34 | 9 | 87 | 1.0 |
| 12-13 . . . | 21 | 286 | 203 | 21 | 18 | 43 | 1.6 |
| 13-14 . . . | 43 | 81 | 46 | 21 | 5 | 2 | 0.5 |
| 14-15 . . . | 101 | 698 | 281 | 251 | 117 | 103 | 4.3 |
| 15-16 . . . | 158 | 283 | 328 | 311 | 248 | 16 | 3.6 |
| 10 Years' Mean | 127 | 147 | 138 | 90 | 86 | 30 | 1.6 |

सत्यमेव जयते

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 19

River Odal (Kadwa)

Site Khadakojar

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|-------|-------|-------|-------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906-07 . . . | 1 | 1 | (Nil) | (Nil) | Nil | Nil | Nil | 0.4 |
| 07-08 . . . | 1 | Nil | Nil | Nil | (Nil) | (Nil) | Nil | 0.5 |
| 08-09 . . . | (Nil) | (Nil) | (Nil) | (Nil) | (Nil) | (Nil) | Nil | 0.1 |
| 09-10 . . . | 1 | 1 | Nil | Nil | Nil | 44 | 0.1 | 2.6 |
| 10-11 . . . | 3 | 2 | 1 | 1 | 1 | Nil | Nil | 1.9 |
| 1911-12 . . . | 4 | 1 | 1 | Nil | (Nil) | 10 | Nil | 1.0 |
| 12-13 . . . | 6 | 1 | (Nil) | (Nil) | (Nil) | 1 | Nil | 1.6 |
| 13-14 . . . | (Nil) | (Nil) | (Nil) | (Nil) | (Nil) | 6 | Nil | 0.5 |
| 14-15 . . . | 29 | 1 | 1 | Nil | (Nil) | (Nil) | 0.1 | 4.4 |
| 15-16 . . . | 1 | (Nil) | (Nil) | (Nil) | (Nil) | (Nil) | Nil | 3.6 |
| 10 Years' Mean | 5 | 1 | Nil | Nil | Nil | 6 | Nil | 1.7 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 19

River Odal (Kadwa)

Site Khadakozar

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|------|------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1917 . . . | | | | | | | |
| 18 . . . | | | | | | | |
| 19 . . . | | | | | | | |
| 20 . . . | | | | | | | |
| 1921 . . . | | | | | | | |
| 1922-23 . . . | | | | | | | |
| 23-24 . . . | | | | | | | |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 9 Years' Mean | | | | | | | |



सत्यमेव जयते

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 19

River Odal (Kadwa)

Site Khadakozar

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-----------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | Dec. to May T.M.C. | Annual T.M.C. |
| 1917 . . . | | | | | | | | 1.0 |
| 18 . . . | | | | | | | | 0.3 |
| 19 . . . | | | | | | | | 2.3 |
| 20 . . . | | | | | | | | 0.2 |
| 1921 . . . | | | | | | | | 1.0 |
| 1922-23 . . . | | | | | | | | 0.1 |
| 23-24 . . . | | | | | | | | 0.6 |
| 24-25 . . . | | | | | | | | 0.9 |
| 25-26 . . . | | | | | | | | 0.2 |
| 9 Years' Mean | | | | | | | | 0.7 |

Note;—The figures for the years 1917 to 1919 are for ten months, January to March and June to December. The figures for the years 1922-23 to 1925-26 are for twelve months from May to April. The position regarding the figures for 1920 and 1921 is not clear.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLO

SERIAL No. 20

River Pravara

Site Arther Hill (Bhandardhara)

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|--------------|--------------|--------------|------------|-----------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1946-47 . . . | | | | | | | |
| 47-48 . . . | 20 | 2,138 | 1,906 | 1,649 | 335 | 25 | 16.2 |
| 48-49 . . . | 277 | 2,439 | 1,654 | 708 | 168 | 115 | 14.1 |
| 49-50 . . . | 243 | 2,515 | 2,434 | 1,481 | 320 | 33 | 18.6 |
| 50-51 . . . | 99 | 4,544 | 105 | 1,253 | 187 | 70 | 16.7 |
| 1951-52 . . . | 369 | 2,155 | 2,844 | 197 | 295 | 48 | 15.8 |
| 52-53 . . . | 920 | 4,294 | 2,164 | 226 | 137 | 45 | 20.8 |
| 53-54 . . . | 1,029 | 1,747 | 4,413 | 490 | 223 | 44 | 21.2 |
| 54-55 . . . | 270 | 2,729 | 1,918 | 2,754 | 420 | 71 | 21.5 |
| 55-56 . . . | 385 | 1,694 | 2,368 | 2,024 | 796 | 14 | 19.1 |
| 1956-57 . . . | 360 | 4,955 | 3,589 | 1,322 | 663 | 14 | 29.0 |
| 57-58 . . . | 771 | 2,394 | 1,779 | 446 | 54 | 28 | 14.6 |
| 58-59 . . . | 117 | 4,171 | 1,433 | 1,227 | 53 | 64 | 18.8 |
| 59-60 . . . | 122 | 4,525 | 714 | 1,500 | Nil | 33 | 18.3 |
| 60-61 . . . | 332 | 2,047 | 2,346 | 123 | Nil | 34 | 13.1 |
| 14 Years' Mean | 380 | 3,025 | 2,119 | 1,100 | 261 | 46 | 18.4 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 20

River Pravara

Site Arther Hill (Bhandardhara)

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1946-47* | | 10 | 16 | 11 | 69 | 32 | | |
| 47-48 | 18 | 31 | 15 | 23 | 36 | 24 | 0.4 | 16.6 |
| 48-49 | 13 | 47 | 15 | 37 | 73 | 68 | 0.6 | 14.7 |
| 49-50 | 35 | 17 | 32 | 50 | 31 | 23 | 0.5 | 19.1 |
| 50-51 | 23 | 27 | 25 | 31 | 24 | 5 | 0.5 | 17.2 |
| 1951-52 | 58 | 76 | 32 | 28 | 62 | 17 | 0.8 | 16.6 |
| 52-53 | 25 | 18 | 26 | 16 | 17 | 20 | 0.3 | 21.1 |
| 53-54 | 30 | 28 | 17 | 65 | 24 | 16 | 0.5 | 21.7 |
| 54-55 | 67 | 24 | 36 | 3 | 9 | 3 | 0.4 | 21.9 |
| 55-56 | 14 | 13 | 4 | 7 | 8 | 10 | Nil | 19.1 |
| 1956-57 | 22 | 18 | 12 | 6 | 11 | 21 | 0.2 | 29.2 |
| 57-58 | 7 | 25 | 8 | 14 | 24 | 7 | 0.2 | 14.8 |
| 58-59 | 49 | 7 | 41 | 18 | 13 | 4 | 0.2 | 19.0 |
| 59-60 | 76 | 26 | 45 | 58 | 72 | 46 | 0.9 | 19.2 |
| 60-61 | 90 | 44 | 35 | 98 | 103 | 92 | 1.2 | 14.3 |
| 14 Years' Mean | 38 | 29 | 24 | 32 | 36 | 25 | 0.5 | 18.9 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL

SERIAL No. 21

River Pravara

Site Ozer

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------|------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906-07 . . . | | | | | | | |
| 07-08 . . . | | | | | | | |
| 08-09 . . . | | | | | | | |
| 09-10 . . . | | | | | | | |
| 10-11 . . . | | | | | | | |
| 1911-12 . . . | | | | | | | |
| 12-13 . . . | | | | | | | |
| 13-14 . . . | | | | | | | |
| 14-15 . . . | | | | | | | |
| 15-16 . . . | | | | | | | |
| 1916-17 . . . | | | | | | | |
| 17-18 . . . | | | | | | | |
| 18-19 . . . | | | | | | | |
| 19-20 . . . | | | | | | | |
| 20-21 . . . | | | | | | | |
| 1921-22 . . . | | | | | | | |
| 22-23 . . . | | | | | | | |
| 23-24 . . . | | | | | | | |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 20 Years' Mean | | | | | | | |



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 21

River **Pravara**

Site **Ozer**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906-07 . . . | | | | | | | | 26.1 |
| 07-08 . . . | | | | | | | | 27.4 |
| 08-09 . . . | | | | | | | | 38.8 |
| 09-10 . . . | | | | | | | | 36.0 |
| 10-11 . . . | | | | | | | | 33.6 |
| 1911-12 . . . | | | | | | | | 17.7 |
| 12-13 . . . | | | | | | | | 26.9 |
| 13-14 . . . | | | | | | | | 29.8 |
| 14-15 . . . | | | | | | | | 47.1 |
| 15-16 . . . | | | | | | | | 28.0 |
| 1916-17 . . . | | | | | | | | 41.0 |
| 17-18 . . . | | | | | | | | 48.4 |
| 18-19 . . . | | | | | | | | 13.7 |
| 19-20 . . . | | | | | | | | 40.5 |
| 20-21 . . . | | | | | | | | 30.6 |
| 1921-22 . . . | | | | | | | | 19.4 |
| 22-23 . . . | | | | | | | | 1.2 |
| 23-24 . . . | | | | | | | | 31.4 |
| 24-25 . . . | | | | | | | | 29.9 |
| 25-26 . . . | | | | | | | | 25.6 |
| 20 Years' Mean | | | | | | | | 29.7 |

Note: The figures for the years 1906-07 to 1919-20 are for five months, June to October. The figures for the years 1922-23 to 1925-26 are for twelve months from May to April. The position regarding the figures for 1920 and 1921 is not clear

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 21

River Pravara

Site Ozer

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|-------|-------|-------|-------|-------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1941-42 . . . | 538 | 3,653 | 3,069 | 648 | 638 | 71 | 23.0 |
| 42-43 . . . | 358 | 3,290 | 2,298 | 1,741 | 653 | 173 | 22.5 |
| 43-44 . . . | 467 | 2,769 | 2,272 | 1,352 | 1,604 | 125 | 22.8 |
| 44-45 . . . | 541 | 5,917 | 4,317 | 1,180 | 620 | 238 | 34.2 |
| 45-46 . . . | 403 | 2,688 | 2,509 | 1,416 | 600 | 122 | 20.5 |
| 1946-47 . . . | 419 | 2,054 | 5,448 | 2,022 | 807 | 2,033 | 33.9 |
| 47-48 . . . | 376 | 1,319 | 1,692 | 2,928 | 887 | 138 | 19.4 |
| 48-49 . . . | 384 | 332 | 340 | 415 | (857) | (376) | 7.2 |
| 49-50 . . . | 610 | 907 | 2,039 | 2,415 | 1,066 | (376) | 19.7 |
| 50-51 . . . | 309 | 3,054 | 1,984 | 1,866 | 835 | 108 | 21.6 |
| 1951-52 . . . | 495 | 912 | 1,808 | 633 | 893 | 160 | 12.9 |
| 52-53 . . . | 586 | 2,926 | 2,891 | 646 | 713 | 511 | 21.9 |
| 53-54 . . . | 557 | 792 | 4,248 | 708 | 784 | 507 | 20.1 |
| 54-55 . . . | 411 | 1,273 | 1,056 | 2,727 | 783 | 714 | 18.4 |
| 55-56 . . . | 407 | 787 | 993 | 2,428 | 1,274 | 380 | 16.6 |
| 1956-57 . . . | 542 | 3,155 | 3,753 | 1,228 | 1,788 | 121 | 28.3 |
| 57-58 . . . | 1,686 | 1,371 | 2,123 | 937 | 654 | 448 | 19.2 |
| 58-59 . . . | 492 | 3,080 | 2,465 | 2,172 | 480 | 596 | 24.5 |
| 59-60 . . . | 454 | 2,446 | 3,663 | 2,449 | 808 | 473 | 27.3 |
| 60-61 . . . | 448 | 823 | 1,988 | 1,400 | 578 | 632 | 15.4 |
| 20 Years' Mean | 524 | 2,177 | 2,548 | 1,566 | 866 | 415 | 21.5 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 21

River Pravara

Site Ozer

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|-------|-------|------|------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1941-42 . . . | 42 | 35 | 38 | 34 | 106 | (69) | 0.9 | 23.9 |
| 42-43 . . . | 118 | 59 | Nil | Nil | 52 | 90 | 0.8 | 23.3 |
| 43-44 . . . | 71 | 87 | 25 | 54 | 45 | 47 | 0.8 | 23.6 |
| 44-45 . . . | 122 | 140 | 57 | 46 | 39 | 44 | 1.1 | 35.3 |
| 45-46 . . . | 43 | 73 | 39 | 28 | 67 | 229 | 1.3 | 21.8 |
| 1946-47 . . . | 258 | 222 | 56 | 35 | 145 | 32 | 2.0 | 35.9 |
| 47-48 . . . | 80 | 144 | 55 | 64 | 32 | 23 | 1.1 | 20.5 |
| 48-49 . . . | (107) | (93) | (52) | (33) | (62) | (69) | (1.1) | 8.3 |
| 49-50 . . . | (107) | 34 | 64 | 26 | 48 | 54 | 0.9 | 20.6 |
| 50-51 . . . | 120 | 43 | 133 | 9 | 26 | 35 | 0.9 | 22.5 |
| 1951-52 . . . | 91 | 520 | 386 | 343 | 687 | 444 | 6.5 | 19.4 |
| 52-53 . . . | 445 | 398 | (428) | (417) | 379 | 706 | 7.3 | 29.2 |
| 53-54 . . . | 509 | 269 | 366 | 385 | 463 | 477 | 6.5 | 26.6 |
| 54-55 . . . | 483 | 365 | 429 | 317 | 411 | 382 | 6.2 | 24.6 |
| 55-56 . . . | 395 | 480 | 451 | 481 | 544 | 444 | 7.4 | 24.0 |
| 1956-57 . . . | 240 | 336 | 375 | 420 | 484 | 663 | 6.6 | 34.9 |
| 57-58 . . . | 480 | 326 | 312 | 378 | 425 | 358 | 6.1 | 25.3 |
| 58-59 . . . | 499 | 319 | 589 | 403 | 474 | 410 | 7.0 | 31.5 |
| 59-60 . . . | 682 | 475 | 548 | 448 | 686 | 505 | 8.9 | 36.2 |
| 60-61 . . . | 544 | 444 | 396 | 581 | 656 | 550 | 8.5 | 23.9 |
| 20 Years' Mean | 272 | 243 | 240 | 225 | 292 | 282 | 4.1 | 25.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 22

River Pravara

Site Newasa

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|--------------|--------------|--------------|--------------|--------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1949-50 . . . | | | | | | | |
| 50-51 . . . | | | | | | | |
| 1951-52 . . . | | | | | | | |
| 52-53 . . . | | | | | | | |
| 53-54 . . . | | | | | | | |
| 54-55 . . . | 938 | 4,249 | 2,621 | 6,946 | 1,271 | 165 | 42.6 |
| 55-56 : : . | 270 | 2,250 | 3,594 | 7,101 | 3,164 | 185 | 43.7 |
| 1956-57 . . . | 574 | 9,026 | 10,248 | 4,706 | 6,933 | 1,536 | 87.9 |
| 57-58 . . . | 2,232 | 3,511 | 4,474 | 5,655 | 2,566 | 430 | 49.9 |
| 58-59 . . . | 1,215 | 17,845 | 11,753 | 11,300 | 5,005 | 1,834 | 129.9 |
| 59-60 . . . | 2,069 | 13,803 | 15,990 | 13,797 | 5,601 | 2,419 | 142.3 |
| 60-61* . . . | 2,111 | 6,686 | 11,162 | 13,044 | 4,523 | 202 | 99.7 |
| 6 Years' Mean | 1,216 | 8,447 | 8,113 | 8,251 | 4,093 | 1,095 | 82.7 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 22

River Pravara

Site Newasa

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1949-50* . . . | | | | | 89 | 65 | | |
| 50-51* . . . | | | | 74 | 64 | | | |
| 1951-52* . . . | | 141 | 114 | 74 | 69 | | | |
| 52-53* . . . | | | | | | | | |
| 53-54* . . . | | 49 | 42 | 41 | 26 | 47 | | |
| 54-55 . . . | 168 | 117 | 67 | 57 | 45 | 36 | 1.3 | 43.9 |
| 55-56 . . . | 264 | 216 | 148 | 105 | 91 | 358 | 3.2 | 46.9 |
| 1956-57 . . . | 467 | 264 | 197 | 143 | 131 | 141 | 3.6 | 91.5 |
| 57-58 . . . | 135 | 131 | 72 | 44 | 37 | 65 | 1.4 | 51.3 |
| 58-59 . . . | 1,397 | 118 | 100 | 62 | 65 | 132 | 5.0 | 134.9 |
| 59-60 . . . | 165 | 125 | 113 | 65 | 36 | 228 | 1.9 | 144.2 |
| 60-61* . . . | 131 | | | | | | | |
| 6 Years' Mean | 433 | 162 | 116 | 79 | 68 | 160 | 2.7 | 85.4 |

*Not considered for Calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 23

River Mula (Pravara)

Site Chikalthan

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|------|------|------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1906-07 . . . | | | | | | | |
| 07-08 . . . | | | | | | | |
| 08-09 . . . | | | | | | | |
| 09-10 . . . | | | | | | | |
| 10-11 . . . | | | | | | | |
| 1911-12 . . . | | | | | | | |
| 12-13 . . . | | | | | | | |
| 13-14 . . . | | | | | | | |
| 14-15 . . . | | | | | | | |
| 15-16 . . . | | | | | | | |
| 1916-17 . . . | | | | | | | |
| 17-18 . . . | | | | | | | |
| 18-19 . . . | | | | | | | |
| 19-20 . . . | | | | | | | |
| 20-21 . . . | | | | | | | |
| 1921-22 . . . | | | | | | | |
| 22-23 . . . | | | | | | | |
| 23-24 . . . | | | | | | | |
| 24-25 . . . | | | | | | | |
| 25-26 . . . | | | | | | | |
| 20 Years' Mean | | | | | | | |



MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 23

River **Mula (Pravara)**

Site **Chikalthan**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1906-07 . . . | | | | | | | | 28.5 |
| 07-08 . . . | | | | | | | | 39.6 |
| 08-09 . . . | | | | | | | | 40.2 |
| 09-10 . . . | | | | | | | | 34.2 |
| 10-11 . . . | | | | | | | | 55.0 |
| 1911-12 . . . | | | | | | | | 28.0 |
| 12-13 . . . | | | | | | | | 45.5 |
| 13-14 . . . | | | | | | | | 56.4 |
| 14-15 . . . | | | | | | | | 70.0 |
| 15-16 . . . | | | | | | | | 47.4 |
| 1916-17 . . . | | | | | | | | 49.6 |
| 17-18 . . . | | | | | | | | 30.2 |
| 18-19 . . . | | | | | | | | 9.4 |
| 19-20 . . . | | | | | | | | 35.1 |
| 20-21 . . . | | | | | | | | 17.3 |
| 1921-22 . . . | | | | | | | | 24.1 |
| 22-23 . . . | | | | | | | | 28.4 |
| 23-24 . . . | | | | | | | | 27.9 |
| 24-25 . . . | | | | | | | | 31.1 |
| 25-26 . . . | | | | | | | | 21.2 |
| 20 Years' Mean | | | | | | | | 36.0 |

Note—The figures for the years 1906-07 to 1919-20 are for seven months, June to December. The figures for the years 1922-23 to 1925-26 are for twelve months from May to April. The position regarding figures for 1920-21 and 1921-22 is not clear.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 23

River Mula (Pravara)

Site Chikalthan

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T. M. C |
|----------------|-------------------------|-------|-------|-------|-------|-------|--|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1945-46* . . . | | | 3,150 | 1,182 | 316 | 178 | |
| 1946-47 . . . | 461 | 6,841 | 7,134 | 1,910 | 326 | 3,009 | 52.3 |
| 47-48 . . . | 10 | 3,884 | 4,040 | 6,147 | 1,509 | 115 | 41.4 |
| 48-49 . . . | 96 | 2,770 | 1,783 | 614 | 148 | 992 | 17.0 |
| 49-50 . . . | 113 | 2,288 | 3,496 | 2,621 | 1,378 | 182 | 26.8 |
| 50-51 . . . | 37 | 7,560 | 2,321 | 1,935 | 881 | 72 | 34.1 |
| 1951-52 . . . | 439 | 3,034 | 4,180 | 335 | 1,673 | 294 | 26.6 |
| 52-53 . . . | 911 | 6,769 | 3,786 | 258 | 204 | 74 | 32.0 |
| 53-54 . . . | 706 | 1,638 | 4,510 | 220 | 523 | 35 | 20.4 |
| 54-55* . . . | | | | | 130 | 51 | |
| 55-56 . . . | 284 | 1,492 | 2,016 | 3,492 | 1,146 | 107 | 22.6 |
| 1956-57 . . . | 106 | 4,417 | 4,047 | 981 | 2,142 | 578 | 32.6 |
| 57-58 . . . | 584 | 2,801 | 2,487 | 1,130 | 85 | 40 | 18.9 |
| 58-59* . . . | | | | 2,737 | 303 | 207 | |
| 59-60 . . . | 349 | 6,967 | 3,610 | 3,791 | 925 | 301 | 42.4 |
| 60-61 . . . | 322 | 2,424 | 3,682 | 1,865 | 647 | 52 | 23.8 |
| 13 Years' Mean | 340 | 4,068 | 3,622 | 1,946 | 891 | 450 | 30.1 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 23

River Mula (Pravara)

Site Chikalthan

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1945-46* . . . | 105 | 8 | 4 | 2 | 1 | 2 | 0.3 | |
| 1946-47 . . . | 771 | 86 | 52 | 34 | 25 | 13 | 2.6 | 54.9 |
| 47-48 . . . | 46 | 46 | 35 | 21 | 15 | 10 | 0.4 | 41.8 |
| 48-49 . . . | 130 | 60 | 38 | 22 | 12 | 26 | 0.8 | 17.8 |
| 49-50 . . . | 64 | 37 | 29 | 21 | 14 | 131 | 0.9 | 27.7 |
| 50-51 . . . | 37 | 24 | 15 | 11 | 7 | 78 | 0.4 | 34.5 |
| 1951-52 . . . | 89 | 42 | 27 | 22 | 13 | 10 | 0.5 | 27.1 |
| 52-53 . . . | 38 | 21 | 14 | 11 | 6 | 3 | 0.2 | 32.2 |
| 53-54 . . . | 14 | 11 | 5 | (18) | 2 | 9 | Nil | 20.4 |
| 54-55* . . . | 28 | 22 | 13 | 8 | 5 | 4 | 0.2 | |
| 55-56 . . . | 86 | 38 | 22 | 15 | 9 | 175 | 0.9 | 23.5 |
| 1956-57 . . . | 172 | 72 | 42 | 33 | 22 | 34 | 1.1 | 33.7 |
| 57-58 . . . | 22 | 16 | 10 | 7 | (11) | (48) | 0.2 | 19.1 |
| 58-59* . . . | 51 | 22 | 16 | 11 | 22 | 36 | 0.4 | |
| 59-60 . . . | 65 | 32 | 19 | 13 | 6 | 6 | 0.3 | 42.7 |
| 60-61 . . . | 22 | 12 | 8 | 5 | 3 | 87 | 0.3 | 24.1 |
| 13 Years' Mean | 120 | 38 | 24 | 18 | 11 | 48 | 0.7 | 30.7 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 24

River Shiv (Pravara)

Site Khadak Wagulgaon

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|------|------|------|------|------|------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1958-59* | | | | | 797 | | |
| 59-60 | 784 | 173 | 95 | 526 | 736 | 175 | 6.7 |
| 60-61 | 221 | 161 | 107 | 276 | 243 | 14 | 2.7 |
| 2 Years' Mean | 502 | 167 | 101 | 401 | 490 | 94 | 4.7 |

SERIAL No. 25

River Purna

Site Sidheshwar

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|-------|--------|--------|-------|-------|------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1957-58 | | | | | | | |
| 58-59 | 2,192 | 4,245 | 18,461 | 18,115 | 1,591 | 1,581 | 121.9 |
| 59-60 | 727 | 4,611 | 2,779 | 20,857 | 6,433 | 1,417 | 96.7 |
| 60-61 | 5,324 | 3,093 | 3,389 | 1,831 | 1,529 | 158 | 40.4 |
| 3 Years' Mean | 2,748 | 3,983 | 8,210 | 13,601 | 3,184 | 1,052 | 86.3 |

SERIAL No. 26

River Purna

Site Railway Bridge

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|---------|--------|--------|--------|-------|------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1957-58 | | | | | | | |
| 58-59 | 1,195 | 6,581 | 36,237 | 29,128 | 5,025 | 2,564 | 213.4 |
| 59-60 | 894 | 4,593 | 3,799 | 26,459 | 10,957 | 1,980 | 127.8 |
| 60-61 | 1,165 | (5,587) | 28,046 | 4,619 | 3,629 | 1,468 | 118.6 |
| 3 Years' Mean | 1,085 | 5,587 | 22,694 | 20,069 | 6,537 | 2,004 | 153.3 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 24

River Shiv (Pravara)

Site Khadak Wagulgaon

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1958-59* . . . | 220 | 58 | 39 | 20 | 9 | 6 | 1.0 | |
| 59-60 . . . | 63 | 35 | 21 | 13 | 6 | 7 | 0.4 | 7.1 |
| 60-61 . . . | 6 | 4 | 2 | Nil | Nil | Nil | Nil | 2.7 |
| 2 Years' Mean | 34 | 20 | 12 | 6 | 3 | 4 | 0.2 | 4.9 |

SERIAL No. 25

River Purna

Site Sidheshwar

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1957-58* . . . | | 161 | 45 | 18 | 19 | 26 | | |
| 58-59 . . . | 703 | 388 | 220 | 80 | Nil | Nil | 3.6 | 125.5 |
| 59-60 . . . | 743 | Nil | Nil | Nil | Nil | Nil | 2.0 | 98.7 |
| 60-61 . . . | 60 | 44 | 27 | 9 | 2 | 18 | 0.4 | 40.8 |
| 3 Years' Mean | 502 | 144 | 82 | 30 | 1 | 6 | 2.0 | 88.3 |

SERIAL No. 26

River Purna

Site Railway Bridge

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1957-58* . . . | | | 189 | 116 | 94 | 62 | | |
| 58-59 . . . | 1,267 | 344 | 183 | 92 | 51 | 21 | 5.1 | 218.5 |
| 59-60 . . . | 663 | 617 | 292 | 163 | 75 | 35 | 4.9 | 132.7 |
| 60-61 . . . | 308 | 207 | 164 | 106 | 14 | 40 | 2.2 | 120.8 |
| 3 Years' Mean | 746 | 389 | 213 | 120 | 47 | 32 | 4.1 | 157.3 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 27

River Manjra

Site Ghanpur anicut

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|---------------|---------------|---------------|---------------|--------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1951-52 . . . | 8,996 | 12,969 | 6,159 | 6,867 | 6,160 | 1,774 | 113.4 |
| 52-53 . . . | 993 | 3,563 | 1,423 | 6,030 | 4,134 | 707 | 44.4 |
| 53-54 . . . | 5,881 | 4,823 | 5,797 | 19,728 | 18,521 | 2,058 | 149.6 |
| 54-55 . . . | 1,677 | 7,594 | 13,000 | 17,800 | 31,136 | 1,622 | 193.1 |
| 55-56 . . . | 8,924 | 11,544 | 95,292 | 29,523 | 10,682 | 2,012 | 419.5 |
| 1956-57 . . . | 2,536 | 48,616 | 28,662 | 16,164 | 10,874 | 18,689 | 333.0 |
| 57-58 . . . | 2,964 | 3,690 | 36,002 | 11,610 | 9,963 | 3,793 | 180.6 |
| 58-59 . . . | 274 | 8,124 | 34,606 | 29,211 | 9,063 | 3,376 | 224.0 |
| 59-60 . . . | 6,241 | 4,719 | 16,323 | 14,343 | 23,155 | 4,704 | 183.9 |
| 60-61 . . . | 6,907 | 4,150 | 3,002 | 7,453 | 6,107 | 2,754 | 79.8 |
| 10 Years' Mean | 4,539 | 10,979 | 24,027 | 15,873 | 12,980 | 4,149 | 192.1 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 27

River **Manjra**

Site **Ghanpur anicut**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|-----------------------|-------------------------|--------------|------------|------------|------------|------------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1951-52 . . . | 1,312 | 1,154 | 90 | 256 | 52 | 295 | 8.4 | 121.8 |
| 52-53 . . . | 847 | 639 | 98 | 51 | 19 | 7 | 4.3 | 48.7 |
| 53-54 . . . | 734 | 752 | 367 | 192 | 113 | 17 | 5.7 | 155.3 |
| 54-55 . . . | 123 | 960 | 503 | 256 | 78 | Nil | 5.0 | 198.1 |
| 55-56 . . . | 367 | 282 | 253 | 143 | 64 | 694 | 4.9 | 424.4 |
| 1956-57 . . . | 3,533 | 2,117 | 1,111 | 737 | 1,737 | 178 | 24.9 | 357.9 |
| 57-58 . . . | 2,521 | 1,420 | 986 | 718 | 669 | 443 | 17.8 | 198.4 |
| 58-59 . . . | 3,048 | 2,205 | 1,686 | 414 | 45 | 6 | 19.4 | 243.4 |
| 59-60 . . . | 3,129 | 2,267 | 1,710 | 1,554 | 230 | 274 | 24.3 | 208.2 |
| 60-61 . . . | 1,676 | 776 | 528 | 228 | 27 | 413 | 9.7 | 89.5 |
| 10 Years' Mean | 1,729 | 1,257 | 733 | 455 | 303 | 233 | 12.4 | 204.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 28

River **Manjra**

Site **Nizamsagar**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|--------|--------|--------|--------|--------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1934-35* . . . | | | | 16,321 | 4,543 | 3,863 | |
| 35-36 . . . | 5,641 | 4,874 | 5,861 | 32,184 | 6,565 | 2,858 | 151.8 |
| 1936-37 . . . | 1,193 | 2,148 | 3,300 | 4,399 | 3,064 | 3,548 | 46.5 |
| 37-38 . . . | 1,490 | 7,266 | 1,389 | 4,389 | 5,278 | 1,231 | 55.8 |
| 38-39 . . . | 20,666 | 16,655 | 25,422 | 28,397 | 13,044 | 1,374 | 278.4 |
| 39-40 . . . | 981 | 2,565 | 1,738 | 2,489 | 869 | 355 | 23.8 |
| 40-41 . . . | 1,869 | 1,318 | 11,792 | 4,286 | 5,652 | 722 | 68.0 |
| 1941-42 . . . | 111 | 168 | 905 | 9,043 | 866 | 324 | 29.6 |
| 42-43 . . . | 5,984 | 2,473 | 10,382 | 12,886 | 903 | 508 | 87.0 |
| 43-44 . . . | 4,275 | 3,371 | 817 | 35,373 | 16,101 | 2,010 | 162.3 |
| 44-45 . . . | 831 | 5,395 | 1,707 | 6,559 | 2,463 | 5,579 | 59.3 |
| 45-46 . . . | 1,239 | 7,574 | 11,755 | 15,778 | 5,058 | 1,280 | 112.7 |
| 1946-47 . . . | 3,975 | 2,237 | 4,529 | 9,750 | 1,309 | 948 | 59.7 |
| 47-48 . . . | 1,510 | 3,283 | 19,399 | 22,435 | 18,361 | 1,587 | 176.2 |
| 48-49 . . . | 1,850 | 5,911 | 10,909 | 34,950 | 15,922 | 17,057 | 227.2 |
| 49-50 . . . | 3,620 | 12,640 | 5,250 | 44,435 | 12,709 | 2,234 | 212.4 |
| 50-51 . . . | 628 | 1,699 | 1,346 | 31,968 | 4,733 | 1,365 | 108.9 |
| 1951-52 . . . | 7,789 | 11,492 | 7,417 | 7,276 | 6,504 | 1,037 | 109.9 |
| 52-53 . . . | 1,002 | 5,032 | 2,040 | 6,215 | 4,503 | 769 | 51.8 |
| 53-54 . . . | 7,290 | 4,325 | 6,021 | 14,530 | 17,671 | 2,131 | 137.1 |
| 54-55 . . . | 1,691 | 7,904 | 13,826 | 20,595 | 31,903 | 1,636 | 205.6 |
| 55-56 . . . | 10,676 | 8,990 | 90,705 | 29,884 | 11,061 | 3,161 | 410.0 |
| 1956-57 . . . | 2,252 | 43,819 | 35,555 | 17,475 | 10,122 | 16,903 | 334.6 |
| 57-58 . . . | 2,645 | 3,812 | 34,146 | 9,637 | 9,162 | 2,131 | 163.6 |
| 58-59 . . . | 215 | 14,236 | 32,151 | 29,635 | 5,348 | 2,016 | 221.1 |
| 59-60 . . . | 7,806 | 5,565 | 19,394 | 13,327 | 20,940 | 2,095 | 183.0 |
| 60-61 . . . | 4,239 | 4,330 | 1,358 | 5,769 | 4,367 | 1,070 | 55.7 |
| 26 Years' Mean | 3,903 | 7,272 | 13,812 | 17,449 | 9,018 | 2,920 | 143.5 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 28

River **Manjra**

Site **Nizamsagar**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|-------|-------|-------|-------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1934-35* . . . | 640 | 519 | 97 | 123 | 271 | 90 | 4.5 | |
| 35-36 . . . | 634 | 625 | 766 | 339 | 752 | 55 | 8.3 | 160.1 |
| 1936-37 . . . | 448 | 306 | 320 | 506 | 1,596 | 211 | 8.9 | 55.4 |
| 37-38 . . . | 592 | 805 | 767 | 1,025 | 1,040 | 672 | 12.9 | 68.7 |
| 38-39 . . . | 1,076 | 1,471 | 1,179 | 759 | 781 | 915 | 16.1 | 294.5 |
| 39-40 . . . | 248 | 102 | 49 | 284 | 71 | 42 | 2.2 | 26.0 |
| 40-41 . . . | 369 | 247 | 157 | 433 | 234 | 39 | 4.0 | 72.0 |
| 1941-42 . . . | 229 | 323 | 191 | 179 | 209 | 143 | 3.4 | 33.0 |
| 42-43 . . . | 1,040 | 452 | 334 | 229 | 248 | 938 | 8.5 | 95.5 |
| 43-44 . . . | 909 | 662 | 534 | 988 | 343 | 117 | 9.3 | 171.6 |
| 44-45 . . . | 771 | 542 | 323 | 143 | 61 | 84 | 5.2 | 64.5 |
| 45-46 . . . | 794 | 633 | 526 | 373 | 274 | 243 | 7.5 | 120.2 |
| 1946-47 . . . | 425 | 589 | 350 | 481 | 239 | 129 | 5.7 | 65.4 |
| 47-48 . . . | 1,011 | 775 | 443 | 347 | 253 | 452 | 8.7 | 184.9 |
| 48-49 . . . | 4,004 | 1,382 | 951 | 460 | 327 | 234 | 19.3 | 246.5 |
| 49-50 . . . | 1,227 | 876 | 387 | 292 | 217 | 67 | 8.1 | 220.5 |
| 50-51 . . . | 683 | 486 | 297 | 213 | 102 | 100 | 5.0 | 113.9 |
| 1951-52 . . . | 548 | 386 | 367 | 229 | 126 | 82 | 4.5 | 114.4 |
| 52-53 . . . | 503 | 353 | 201 | 198 | 200 | 53 | 3.8 | 55.6 |
| 53-54 . . . | 1,198 | 686 | 510 | 267 | 103 | 51 | 7.3 | 144.4 |
| 54-55 . . . | 1,017 | 751 | 397 | 198 | 27 | 100 | 6.6 | 212.2 |
| 55-56 . . . | 1,442 | 791 | 541 | 218 | 23 | 163 | 8.5 | 418.5 |
| 1956-57 . . . | 2,902 | 1,179 | 665 | 440 | 799 | 49 | 16.0 | 350.6 |
| 57-58 . . . | 1,001 | 375 | 96 | Nil | Nil | 42 | 4.0 | 167.6 |
| 58-59 . . . | 1,050 | 444 | 158 | 30 | Nil | Nil | 4.5 | 225.6 |
| 59-60 . . . | 1,384 | 525 | 198 | 30 | Nil | Nil | 5.7 | 188.7 |
| 60-61 . . . | 397 | 208 | 43 | 9 | Nil | 52 | 1.9 | 57.6 |
| 26 Years' Mean | 996 | 614 | 413 | 333 | 309 | 194 | 7.5 | 151.1 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 29

River **Alair (Manjra)**

Site **Pocharam**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-----------------------|-------------------------|------------|--------------|--------------|------------|-----------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1948-49 . . . | 20 | 404 | 1,479 | 2,410 | 501 | 139 | 13.1 |
| 49-50 . . . | 50 | 447 | 396 | 2,033 | 637 | 29 | 9.5 |
| 50-51 . . . | 5 | 45 | 61 | 2,857 | 16 | 5 | 7.7 |
| 1951-52 . . . | 54 | 492 | 680 | 61 | 128 | 23 | 3.8 |
| 52-53 . . . | Nil | 211 | 240 | 140 | 108 | 35 | 2.0 |
| 53-54 . . . | Nil | 298 | 228 | 280 | 162 | 45 | 2.6 |
| 54-55 . . . | 11 | 509 | 891 | 410 | 389 | 18 | 5.9 |
| 55-56 . . . | 22 | 364 | 2,343 | 1,241 | 131 | 38 | 11.1 |
| 1956-57 . . . | 53 | 2,972 | 1,223 | 1,584 | 245 | 389 | 17.2 |
| 57-58 . . . | 29 | 141 | 2,353 | 177 | 50 | Nil | 7.4 |
| 58-59 . . . | 22 | 1,391 | 3,887 | 547 | 140 | 22 | 16.1 |
| 59-60 . . . | 44 | 1,503 | 3,101 | 1,665 | 130 | 44 | 17.1 |
| 60-61 . . . | 164 | 404 | 192 | 450 | 229 | 46 | 3.9 |
| 13 Years' Mean | 36 | 706 | 1,313 | 1,066 | 220 | 64 | 9.0 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 29

River **Alair (Manjra)**

Site **Pocharam**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1948-49 . . . | 15 | 43 | 5 | 3 | Nil | Nil | 0.1 | 13.2 |
| 49-50 . . . | 1 | 20 | 10 | Nil | Nil | Nil | 0.1 | 9.6 |
| 50-51 . . . | 4 | 16 | Nil | Nil | Nil | 15 | Nil | 7.7 |
| 1951-52 . . . | Nil | Nil | Nil | 1 | Nil | Nil | Nil | 3.8 |
| 52-53 . . . | 4 | Nil | Nil | Nil | Nil | Nil | Nil | 2.0 |
| 53-54 . . . | 8 | 21 | 33 | 2 | Nil | Nil | 0.2 | 2.8 |
| 54-55 . . . | 9 | 22 | 3 | Nil | Nil | Nil | 0.1 | 6.0 |
| 55-56 . . . | 24 | 3 | Nil | Nil | Nil | Nil | 0.1 | 11.2 |
| 1956-57 . . . | 27 | 18 | Nil | 3 | 9 | Nil | 0.1 | 17.3 |
| 57-58 . . . | Nil | Nil | Nil | Nil | 18 | 7 | Nil | 7.4 |
| 58-59 . . . | 28 | 18 | Nil | Nil | Nil | Nil | 0.1 | 16.2 |
| 59-60 . . . | 16 | Nil | Nil | Nil | Nil | Nil | Nil | 17.1 |
| 60-61 . . . | 36 | Nil | Nil | Nil | Nil | 4 | 0.1 | 4.0 |
| 13 Years' Mean | 13 | 12 | 4 | 1 | 2 | 2 | 0.1 | 9.1 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 30

| River Manor | | | Site Manair | | | | | | |
|----------------|-------------------------|-------|-------------|-------|-------|--------|---|--|--|
| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T. M. C. | | |
| | June | July | Aug. | Sep. | Oct | Nov. | | | |
| 1951-52 . . . | 56 | 319 | 249 | 152 | 505 | 15 | 3.5 | | |
| 52-53 . . . | 9 | 116 | 242 | 199 | 112 | Nil | 1.7 | | |
| 53-54 . . . | 94 | 337 | 966 | 1,045 | 3,064 | 53 | 14.7 | | |
| 54-55 . . . | Nil | 74 | 297 | 1,307 | 164 | 13 | 4.8 | | |
| 55-56 . . . | 129 | 98 | 884 | 2,156 | 456 | 232 | 10.4 | | |
| 1956-57 . . . | 42 | 1,931 | 2,065 | 2,919 | 963 | 10,381 | 47.9 | | |
| 57-58 . . . | 131 | 40 | 1,201 | 316 | 181 | 20 | 5.0 | | |
| 58-59 . . . | 1 | 273 | 3,047 | 1,126 | 124 | 24 | 12.2 | | |
| 59-60 . . . | (58) | (376) | 4,525 | 3,241 | 611 | 32 | 23.3 | | |
| 60-61 . . . | 57 | 192 | 82 | 652 | 361 | 25 | 3.6 | | |
| 10 Years' Mean | 58 | 376 | 1,356 | 1,311 | 654 | 1,080 | 12.7 | | |

SERIAL No. 31

| River Siddepetvagu (Maner) | | | | Site Sanigram | | | |
|----------------------------|-------------------------|-------|------|---------------|-------|------|---------------------------------------|
| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1953-54 . . . | 114 | 20 | 175 | 965 | 2,752 | 845 | 13.0 |
| 54-55 . . . | 5 | 8 | 33 | 97 | 69 | Nil | 0.6 |
| 55-56 . . . | 6 | 22 | 33 | 109 | 79 | 41 | 0.8 |
| 1956-57 . . . | 31 | 1,043 | 216 | 89 | 96 | 32 | 3.8 |
| 57-58 . . . | 9 | 7 | 159 | 131 | 138 | 105 | 1.4 |
| 58-59 . . . | 6 | 395 | 378 | 580 | 393 | 97 | 5.0 |
| 59-60 . . . | 7 | 117 | 391 | 586 | 586 | 61 | 4.6 |
| 60-61 . . . | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| 8 Years' Mean | 22 | 202 | 173 | 320 | 514 | 148 | 3.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 30

River **Maner**

Site **Manair**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|-------------------|-------------------------|------|------|-------|-------|-------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1951-52 | 11 | Nil | Nil | Nil | Nil | 23 | 0.1 | 3.6 |
| 52-53 | 40 | Nil | Nil | Nil | Nil | Nil | 0.1 | 1.8 |
| 53-54 | 29 | Nil | Nil | Nil | Nil | Nil | 0.1 | 14.8 |
| 54-55 | 9 | 2 | Nil | Nil | Nil | Nil | Nil | 4.8 |
| 55-56 | 22 | 6 | Nil | Nil | Nil | 16 | 0.1 | 10.5 |
| 1956-57 | 18 | 9 | 6 | 12 | 15 | 21 | 0.1 | 48.0 |
| 57-58 | 2 | Nil | Nil | Nil | 5 | 11 | Nil | 5.0 |
| 58-59 | 16 | 12 | 4 | (Nil) | (Nil) | (Nil) | Nil | 12.2 |
| 59-60 | 6 | 14 | 2 | (Nil) | (Nil) | (Nil) | Nil | 23.3 |
| 60-61 | 12 | Nil | Nil | Nil | Nil | 9 | Nil | 3.6 |
| 10 Years' Mean | 16 | 4 | 1 | 1 | 2 | 8 | 0.1 | 12.8 |

SERIAL No. 31

River **Siddepetvagu (Maner)**

Site **Sanigram**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|-------------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1953-54 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 13.0 |
| 54-55 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 0.6 |
| 55-56 | 5 | Nil | Nil | Nil | Nil | Nil | Nil | 0.8 |
| 1956-57 | 3 | Nil | Nil | Nil | Nil | Nil | Nil | 3.8 |
| 57-58 | 3 | Nil | Nil | Nil | Nil | Nil | Nil | 1.4 |
| 58-59 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 5.0 |
| 59-60 | Nil | Nil | Nil | Nil | Nil | 4 | Nil | 4.6 |
| 60-61 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| 8 Years' Mean | 1 | Nil | Nil | Nil | Nil | 1 | Nil | 3.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 32

River **Moruvanchavagu (Maner)**

Site **Ramappa Lake**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-------------------|-------------------------|------|-------|------|------|------|--|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1955-56 | | | | | | | |
| 1956-57 | 26 | 299 | 237 | 82 | 173 | Nil | 2.2 |
| 57-58 | Nil | 12 | 198 | Nil | 10 | 6 | 0.5 |
| 58-59 | 3 | 562 | 120 | 90 | 52 | Nil | 2.1 |
| 59-60 | 36 | 710 | 1,252 | 207 | Nil | Nil | 5.9 |
| 60-61 | 245 | 77 | 39 | 36 | 14 | Nil | 1.0 |
| 5 Years' Mean | 62 | 332 | 369 | 83 | 50 | 1 | 2.3 |

SERIAL No. 33

River **Moruvanchavagu (Maner)**

Site **Ghanpur Cheroo**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-------------------|-------------------------|------|------|------|------|------|--|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1955-56 | | | | | | | |
| 1956-57 | 43 | 313 | 74 | 64 | 39 | Nil | 1.4 |
| 57-58 | Nil | 20 | 56 | 41 | 15 | Nil | 0.3 |
| 58-59 | 3 | 91 | 89 | 85 | 26 | Nil | 0.7 |
| 59-60 | 26 | 450 | 604 | 344 | 30 | Nil | 3.9 |
| 60-61 | 64 | 54 | 34 | 42 | 10 | Nil | 0.5 |
| 5 Years' Mean | 27 | 186 | 171 | 115 | 24 | Nil | 1.4 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 32

River Moruvanchavagu (Maner)

Site Ramappa Lake

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1955-56* | | 4 | 15 | 23 | 20 | 8 | | |
| 1956-57 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 2.2 |
| 57-58 | Nil | Nil | Nil | 2 | Nil | Nil | Nil | 0.5 |
| 58-59 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 2.1 |
| 59-60 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 5.9 |
| 60-61 | Nil | Nil | Nil | Nil | Nil | 3 | Nil | 1.0 |
| 5 Years' Mean | Nil | Nil | Nil | Nil | Nil | 1 | Nil | 2.3 |

SERIAL No. 33

River Moruvanchavagu (Maner)

Site Ghanpur Cheroo

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1955-56* | | Nil | Nil | Nil | Nil | Nil | | |
| 1956-57 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 1.4 |
| 57-58 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 0.3 |
| 58-59 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 0.7 |
| 59-60 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 3.9 |
| 60-61 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 0.5 |
| 5 Years' Mean | Nil | Nil | Nil | Nil | Nil | Nil | Nil | 4.1 |

*Not Considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No 34

River **Pranhita**

Site **Jafferabad**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|-------------------|-------------------------|---------|---------|---------|--------|--------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1957-58 | | | | | 10,992 | 4,682 | |
| 58-59 | 1,402 | 117,459 | 174,745 | 244,661 | 64,975 | 13,742 | 1,630.0 |
| 59-60 | 8,618 | 201,520 | 285,180 | 456,811 | 76,623 | 17,441 | 2,760.4 |

SERIAL No. 35

River **Wardha (Pranhita)**

Site **Majri**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|--------------------|-------------------------|---------------|---------------|---------------|--------------|--------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1955-56* | | | 31,616 | 31,233 | 17,438 | 2,153 | |
| 1956-57 | 7,343 | 17,618 | 10,162 | 9,045 | 3,282 | 1,896 | 130.5 |
| 57-58 | 1,903 | 3,839 | 24,892 | 17,567 | 1,804 | 652 | 133.9 |
| 58-59 | 1,138 | 12,975 | 19,486 | 26,362 | 4,709 | 1,863 | 175.6 |
| 59-60 | 4,014 | 33,099 | 25,410 | 61,608 | 8,634 | 1,831 | 354.7 |
| 60-61 | 2,838 | 15,023 | 15,596 | 6,962 | 6,699 | 1,130 | 128.2 |
| 5 Years' Mean | 3,447 | 16,511 | 19,109 | 24,309 | 5,026 | 1,474 | 184.6 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 34

River **Pranhita**

Site **Jafferabad**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|-------|-------|-------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1957-58 . . . | 1,890 | 1,152 | 931 | 637 | 461 | 292 | 14.2 | |
| 58-59 . . . | 8,193 | 2,944 | 2,202 | 1,068 | 605 | 316 | 40.4 | 1,670.4 |
| 59-60 . . . | 7,641 | | | | | | | |

SERIAL No. 35

River **Wardha (Pranhita)**

Site **Majri**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|-------|-------|-------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1955-56* . . . | 1,090 | 607 | 307 | 137 | 50 | 47 | 5.9 | |
| 1956-57 . . . | 512 | 239 | 161 | 421 | 814 | 51 | 5.7 | 136.2 |
| 57-58 . . . | 320 | 200 | 122 | 65 | 29 | 14 | 2.0 | 135.9 |
| 58-59 . . . | 831 | 382 | 223 | 74 | 26 | 10 | 4.0 | 179.6 |
| 59-60 . . . | 993 | (289) | (179) | (160) | 156 | 91 | 4.9 | 359.6 |
| 60-61 . . . | 617 | 334 | 217 | 70 | 38 | 17 | 3.4 | 131.6 |
| 5 Years' Mean | 655 | 289 | 180 | 158 | 213 | 37 | 4.0 | 188.6 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 36

River **Wardha (Pranhita)**

Site **Ballarshah**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|--------|---------|---------|--------|--------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1955-56* . . . | N.A. | N.A. | 135,659 | 101,921 | 61,542 | 14,015 | N.A. |
| 1956-57 . . . | 27,703 | 64,128 | 58,796 | 39,650 | 12,298 | 10,566 | 564.2 |
| 57-58 . . . | 6,209 | 19,131 | 86,104 | 36,128 | 5,949 | 2,273 | 413.3 |
| 58-59 . . . | 1,747 | 57,800 | 71,625 | 88,481 | 10,375 | 3,802 | 618.1 |
| 59-60 . . . | 7,092 | 89,061 | 73,899 | 190,178 | 27,621 | 5,260 | 1,035.3 |
| 60-61† . . . | 1,871 | 4,925 | 4,058 | 3,297 | 2,293 | 394 | 44.5 |
| 5 Years' Mean | 8,924 | 47,009 | 58,896 | 71,547 | 11,707 | 4,459 | 535.1 |

SERIAL No. 37

River **Wainanga (Pranhita)**

Site **Lakhanwara**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Oct.) T.M.C. |
|---------------|-------------------------|------|------|-------|------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1959-60 . . . | 48 | 166 | 493 | 524 | 176 | | 3.7 |
| 60-61 . . . | 30 | 281 | 503 | (254) | 134 | | 3.3 |
| 2 Years' Mean | 39 | 224 | 498 | 389 | 155 | | 3.5 |

* Not considered for calculating the average.

† During 1960-61 current meter observations were not taken when the gauges were above 20.00 feet.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 36

River **Wardha (Pranhita)**

Site **Ballarshah**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------------|-------------------------|--------------|------------|------------|------------|------------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1955-56* . . . | 8,216 | 1,331 | 825 | 415 | 293 | 236 | 30.2 | N. A. |
| 1956-57 . . . | 2,484 | 1,572 | 625 | 1,179 | 1,284 | 383 | 19.9 | 584.1 |
| 57-58 . . . | 989 | 633 | 442 | 306 | 194 | 137 | 7.1 | 420.4 |
| 58-59 . . . | 2,490 | 1,150 | 689 | 339 | 219 | 106 | 13.3 | 631.4 |
| 59-60 . . . | 2,624 | 2,277 | 1,071 | 1,314 | 417 | 140 | 20.8 | 1,056.1 |
| 60-61 . . . | 1,144 | 563 | 537 | (785) | 195 | 62 | 8.7 | 53.2 |
| 5 Years' Mean | 1,946 | 1,239 | 673 | 785 | 462 | 166 | 14.0 | 549.0 |

SERIAL No. 37

River **Wainganga (Pranhita)**

Site **Lakhanwara**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1959-60 . . . | | | | | | | | |
| 60-61 . . . | | | | | | | | |
| 2 Years' Mean | | | | | | | | |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 38

River. **Wainganga (Pranhita)**

Site **Dhuti**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|--------|--------|--------|-------|-------|------------------------------------|
| | June | July | Aug. | Sep. - | Oct. | Nov. | |
| 1941-42 . . . | Nil | 1,213 | 9,524 | 802 | 305 | 5 | 31.6 |
| 42-43 . . . | 684 | 30,903 | 16,793 | 10,710 | 756 | 29 | 159.5 |
| 43-44 . . . | 15 | 15,404 | 9,573 | 11,731 | 2,328 | 370 | 104.5 |
| 44-45 . . . | Nil | 20,312 | 25,604 | 5,826 | 1,649 | 292 | 143.3 |
| 45-46 . . . | 11,995 | 28,507 | 12,228 | 11,721 | 937 | 352 | 174.1 |
| 1946-47 . . . | | 7,389 | 19,667 | 3,343 | 887 | | |
| 47-48 . . . | | | | | | | |
| 48-49 . . . | | 6,329 | 18,508 | 9,760 | 851 | 1,265 | |
| 49-50 . . . | | 3,361 | 17,963 | 19,716 | 8,420 | 770 | |
| 50-51 . . . | | 15,886 | 15,296 | 7,479 | 972 | Nil | |
| 1951-52 . . . | | | | | | | |
| 52-53 . . . | | 2,967 | 9,980 | 4,133 | 517 | | |
| 53-54 . . . | | | | | | | |
| 54-55 . . . | | | | | | | |
| 55-56 . . . | | | | | | | |
| 1956-57 . . . | | | | | | | |
| 57-58 . . . | | 6,350 | 16,498 | 6,214 | 562 | 244 | |
| 58-59 . . . | 102 | 38,055 | 12,834 | 9,649 | 7,011 | Nil | 180.4 |
| 59-60 . . . | 813 | 5,108 | 9,316 | 17,455 | | Nil | |
| 60-61 . . . | 1,365 | 12,687 | 18,962 | 3,445 | 6,598 | 347 | 115.8 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 38

River **Wainganga (Pranhita)**

Site **Dhuti**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1941-42 . . . | | | | | | | | |
| 42-43 . . . | | | | | | | | |
| 43-44 . . . | | | | | | | | |
| 44-45 . . . | | | | | | | | |
| 45-46 . . . | | | | | | | | |
| 1946-47 . . . | | | | | | | | |
| 47-48 . . . | | | | | | | | |
| 48-49 . . . | | | | | | | | |
| 49-50 . . . | | | | | | | | |
| 50-51 . . . | | | | | | | | |
| 1951-52 . . . | | | | | | | | |
| 52-53 . . . | | | | | | | | |
| 53-54 . . . | | | | | | | | |
| 54-55 . . . | | | | | | | | |
| 55-56 . . . | | | | | | | | |
| 1956-57 . . . | | | | | | | | |
| 57-58 . . . | | | | | | | | |
| 58-59 . . . | | 99 | 59 | 59 | | 27 | | |
| 59-60 . . . | | Nil | Nil | | | 4 | | |
| 60-61 . . . | 170 | 122 | 73 | 28 | Nil | 37 | 1.2 | 117.0 |



सत्यमेव जयते

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 39

River **Wainganga (Pranhita)**

Site **Warsa**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------------|-------------------------|---------------|---------------|---------------|---------------|--------------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1957-58 . . . | 2,864 | 35,613 | 97,878 | 24,817 | 4,014 | 1,660 | 444.4 |
| 58-59 . . . | 554 | 30,623 | 55,294 | 58,261 | 32,081 | 4,964 | 481.3 |
| 59-60 . . . | 2,756 | 66,078 | 100,397 | 135,713 | 29,418 | 6,899 | 901.5 |
| 60-61 . . . | 4,842 | 78,385 | 103,266 | 29,530 | 27,947 | 2,947 | 658.1 |
| 4 Years' Mean | 2,754 | 52,675 | 89,209 | 62,080 | 23,365 | 4,118 | 621.3 |

SERIAL No. 40

River **Pench (Wainganga)**

Site **Shingodi**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Oct.) T.M. C. |
|----------------------|-------------------------|--------------|--------------|--------------|------------|------|--|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1959-60 . . . | 714 | 1,156 | 2,388 | 5,786 | 1,031 | | 29.2 |
| 60-61 . . . | 318 | 1,791 | 3,185 | 670 | 512 | 145 | 17.2 |
| 2 Years' Mean | 516 | 1,474 | 2,786 | 3,228 | 772 | | 23.2 |

SERIAL No. 41

River **Pench (Wainganga)**

Site **Totledoh**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|-------|--------|-------|-------|------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1958-59 . . . | | | | 4,888 | | | |
| 59-60 . . . | | | | | | | |
| 60-61 . . . | 1,133 | 6,712 | 10,689 | 1,969 | 2,063 | 594 | 61.6 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 39

River **Wainganga (Pranhita)**

Site **Warsa**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|-------|-------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1957-58 . . . | 705 | 479 | 390 | 325 | 187 | 115 | 5.8 | 450.2 |
| 58-59 . . . | 1,865 | 1,241 | 941 | 355 | 261 | 168 | 12.7 | 494.0 |
| 59-60 . . . | 2,286 | 3,553 | 1,204 | 809 | 504 | 272 | 22.8 | 924.3 |
| 60-61 . . . | 1,505 | 940 | 809 | 519 | 372 | 236 | 11.5 | 669.6 |
| 4 Years' Mean | 1,590 | 1,553 | 836 | 502 | 331 | 198 | 13.2 | 634.5 |

SERIAL No. 40

River **Pench (Wainganga)**

Site **Shingodi**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May. | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1959-60 . . . | | | | | | | | |
| 60-61 . . . | | | | | | | | |
| 2 Years' Mean | | | | | | | | |

SERIAL No. 41

River **Pench (Wainganga)**

Site **Totledoh**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1958-59 . . . | | | | | | | | |
| 59-60 . . . | | | | | | | | |
| 60-61 . . . | 416 | 98 | | | | | | |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 42

River **Indravati**

Site **Pathagudem**

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|--------|---------|---------|--------|--------|------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1957-58 . . . | | | | | 9,851 | 3,736 | |
| 58-59 . . . | 686 | 52,272 | 97,186 | 90,515 | 56,064 | 13,222 | 821.2 |
| 59-60 . . . | 1,580 | 65,110 | 216,498 | 211,095 | 38,792 | 8,684 | 1431.9 |
| 60-61 . . . | | | | | | | |

SERIAL No. 43

River **Sabari**

Site **Pulusura**
(Upper Kolab H.E. Scheme)

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|---------------|-------------------------|--------------|--------------|--------------|--------------|------------|------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1921-22 . . . | (437) | 2,593 | 2,945 | 3,928 | 1,384 | 611 | 31.4 |
| 22-23 . . . | 739 | 7,370 | 3,661 | 4,137 | 1,574 | 952 | 48.8 |
| 23-24 . . . | 230 | 860 | 1,825 | 1,539 | 877 | 941 | 16.5 |
| 24-25 . . . | 400 | 480 | 2,362 | 2,414 | 1,582 | 1,053 | 21.8 |
| 25-26 . . . | 1,348 | 4,853 | 4,877 | 4,206 | 1,661 | 546 | 46.3 |
| 1926-27 . . . | 231 | 1,290 | 4,793 | 3,610 | 1,542 | 510 | 31.7 |
| 27-28 . . . | 3,493 | 4,161 | 5,104 | 2,425 | 1,857 | 717 | 47.1 |
| 28-29 . . . | 662 | 5,055 | 2,203 | 5,432 | 3,327 | 1,009 | 46.7 |
| 8 Years' Mean | 942 | 3,333 | 3,471 | 3,461 | 1,726 | 792 | 36.3 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 42

River **Indravati**

Site **Pathagudem**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|-------|-------|------|------|-----|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1957-58 . . . | 2,168 | 1,461 | 1,000 | 629 | 567 | 749 | 17.3 | |
| 58-59 . . . | 6,080 | 2,579 | 1,699 | 843 | 556 | 547 | 32.5 | 853.7 |
| 59-60 . . . | 3,439 | | | | | | | |
| 60-61 . . . | | | | | | | | |

SERIAL No. 43

River **Sabari**

Site **Pulusura**
(Upper Kolab H.E. Scheme)

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|---------------|-------------------------|------|------|------|-------|-------|------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec to May) T.M.C. | Annual T.M.C. |
| 1921-22 . . . | 416 | 342 | 239 | 162 | 121 | 192 | 3.8 | 35.2 |
| 22-23 . . . | 586 | 433 | 377 | 293 | (119) | 194 | 5.3 | 54.1 |
| 23-24 . . . | 359 | 277 | 197 | 128 | 233 | 245 | 3.8 | 20.3 |
| 24-25 . . . | 410 | 303 | 220 | 177 | 219 | 547 | 5.0 | 26.8 |
| 25-26 . . . | 410 | 535 | 349 | 317 | 288 | 429 | 5.9 | 52.2 |
| 1926-27 . . . | 359 | 281 | 209 | 168 | 142 | 181 | 3.6 | 35.3 |
| 27-28 . . . | 425 | 312 | 235 | 164 | 254 | 121 | 3.9 | 51.0 |
| 28-29 . . . | 556 | 320 | 332 | 244 | (196) | (273) | 5.1 | 51.8 |
| 8 Years' Mean | 440 | 350 | 270 | 207 | 196 | 273 | 4.6 | 40.8 |

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 44

River Sileru (Sabari)

Site Jalaput Dam
(Machkund H.E. Scheme)

| Year | Mean discharge (Cusecs) | | | | | | Volume (June to Nov.) T.M.C. |
|----------------|-------------------------|--------|--------|--------|--------|-------|---------------------------------------|
| | June | July | Aug. | Sep. | Oct. | Nov. | |
| 1942-43 . . . | (922) | 5,662 | 6,732 | 4,143 | 1,549 | 1,215 | 53.5 |
| 43-44 . . . | 240 | 2,316 | 2,981 | 3,632 | 1,435 | 771 | 30.0 |
| 44-45 . . . | 323 | 8,246 | 7,416 | 2,453 | 2,851 | 1,108 | 59.7 |
| 45-46 . . . | 406 | 3,951 | 4,588 | 11,673 | 6,455 | 1,815 | 76.3 |
| 1946-47 . . . | 2,000 | 5,103 | 12,315 | 3,782 | 1,561 | 1,194 | 69.0 |
| 47-48 . . . | 563 | 5,309 | 5,503 | 5,763 | 3,640 | 1,184 | 58.1 |
| 48-49 . . . | 682 | 2,167 | 3,224 | 3,753 | 4,235 | 1,490 | 41.1 |
| 49-50 . . . | 518 | 2,029 | 5,455 | 5,147 | 7,030 | 3,194 | 61.7 |
| 50-51 . . . | 330 | 6,891 | 5,225 | 2,428 | 1,048 | 1,003 | 45.1 |
| 1951-52 . . . | 893 | 6,377 | 14,686 | 3,885 | 2,813 | 1,387 | 79.9 |
| 52-53 . . . | 241 | 5,058 | 8,542 | 6,615 | 5,657 | 1,061 | 72.1 |
| 53-54 . . . | 4,134 | 2,943 | 22,449 | 7,629 | 7,659 | 1,235 | 122.2 |
| 54-55 . . . | 740 | 20,588 | 23,762 | 39,220 | 20,258 | 2,808 | 283.9 |
| 55-56 . . . | | | | | | | |
| 1956-57 . . . | | | | | | | |
| 57-58 . . . | | | | | | | |
| 58-59 . . . | | | | | | | |
| 59-60* . . . | | | | | 1,999 | 1,099 | |
| 60-61* . . . | 999 | 3,933 | 417 | 721 | 881 | 1,004 | 21.1 |
| 13 Years' Mean | 922 | 5,895 | 9,452 | 7,702 | 5,092 | 1,497 | 81.0 |

*Not considered for calculating the average.

MEAN DISCHARGE BY MONTHS AND VOLUME OF ANNUAL FLOW

SERIAL No. 44

River **Sileru (Sabari)**

Site **Jalaput Dam
(Machkund H. E. Scheme)**

| Year | Mean discharge (Cusecs) | | | | | | Volume | |
|----------------|-------------------------|-------|-------|-------|-------|---------|-------------------------|------------------|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | (Dec. to May) T.M.C. | Annual T.M.C. |
| 1942-43 . . . | 660 | 498 | 306 | 181 | 252 | 340 | 5.9 | 59.4 |
| 43-44 . . . | 397 | 375 | 208 | 314 | 239 | 280 | 4.7 | 34.7 |
| 44-45 . . . | 559 | 352 | 263 | 186 | 276 | 152 | 4.6 | 64.3 |
| 45-46 . . . | 897 | 572 | 412 | 297 | 918 | 415 | 9.2 | 85.5 |
| 1946-47 . . . | 577 | 442 | 301 | 227 | 210 | 206 | 5.1 | 74.1 |
| 47-48 . . . | 1,394 | 694 | 454 | 296 | 586 | 486 | 10.3 | 68.4 |
| 48-49 . . . | 697 | 519 | 350 | 224 | 314 | 380 | 6.5 | 47.6 |
| 49-50 . . . | 818 | 527 | 401 | 290 | 216 | 274 | 6.7 | 68.4 |
| 50-51 . . . | 395 | 367 | 258 | 203 | 248 | 517 | 5.2 | 50.3 |
| 1951-52 . . . | 700 | 499 | 313 | 255 | 443 | 322 | 6.7 | 86.6 |
| 52-53 . . . | 722 | 445 | 308 | 196 | 239 | 172 | 5.4 | 77.5 |
| 53-54 . . . | 649 | 474 | 301 | 265 | 396 | 9,788 | 31.6 | 153.8 |
| 54-55 . . . | (705) | (480) | (323) | (244) | (361) | (1,111) | 8.6 | 292.5 |
| 55-56 . . . | | | | | | | | |
| 1956-57 . . . | | | | | | | | |
| 57-58 . . . | | | | | | | | |
| 58-59 . . . | | | | | | | | |
| 59-60* . . . | 725 | 887 | 961 | 1,119 | 1,013 | 954 | 14.9 | |
| 60-61* . . . | 805 | 730 | 886 | 1,260 | 1,380 | 1,287 | 16.7 | 37.8 |
| 13 Years' Mean | 705 | 480 | 323 | 244 | 361 | 1,111 | 8.5 | 89.5 |

*Not considered for calculating the average.